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PART I.

ORIGINAL COMMUNICATIONS.

ART. IX.—*The Restoration of a Lost Nose.—A Series of Cases.* By JOHN HAMILTON, Surgeon to the Richmond Hospital.

(*Continued from* Vols. xxiv. and xxv.)

CASE III.—Dennis O'Keeffe, aged 30, admitted with the nose nearly destroyed by lupus—the greater part of the nasal bones, the septum, the tip, and the alæ having been ulcerated away. The cicatrized portions of the integuments of the nose have fallen flat, so that from between the eyes downwards the remains of the nose are on a level with the cheeks. The integument, which has fallen over the nostrils, and closes them, with the exception of a transverse slit at the lower part, presents a shining, reddish, irregular surface from former ulceration; and this extends a little on either side of the face. Some irregular cicatrization, but less marked, is observable between the eyes; and there is a slightly prominent narrow white band of cicatrix at the right rim of this space, extending up between the eyebrows to the forehead, and an inch above the right eyebrow. The skin is shining and cicatrized; and, therefore, from this part of the forehead no flap could be taken to form the new nose. The condition of the nose, independent of deformity, is further

distressing by rendering respiration difficult; and the opening is so small that it becomes clogged by mucosities, which are discharged with considerable effort.

The disease began eight months before with a small pimple on the side of the septum.

July 28, 1858.—*Operation.*—The chloroform was unsatisfactory, exciting rather than quieting him. I first removed the cicatrized and puckered integument which covered the nostrils. This I did by passing a strong probe bistoury through the slit at the lower end of the remains of the nose, and cutting out horizontally, on both sides, and then on each side, obliquely upwards to the centre. The triangular portion thus isolated was found adherent beneath to the remains of the septum, from which it had to be detached. Both nostrils were now open; and I could put my finger into each. The blood flowed so freely from the thick divided edges that, to prevent its getting back into the mouth, I stuffed the nostrils with pieces of sponge. I next cut from the centre of the bridge of the nose, downwards and outwards, deep, and about one-third of an inch beyond the edge of the open nostrils; the edges of the incisions were dissected up a little, and a raw space left on each side of about half an inch wide. The bleeding, which was profuse, subsided under pressure with a sponge wet with cold water. The

flap was next removed from the forehead, not as usual from the centre, but a little to the left, to avoid the cicatrized portion of the integument, which began in the middle of the forehead, and extended to the right side. In carrying the incisions between the eyebrows I had also to keep from the right side, to avoid the prominent band of cicatrix which there existed. This root of the new nose was broad and thick. A small artery bled so smartly it had to be tied; but the bleeding from the sides and base of the wound, left by the removal of the forehead flap, yielded to cold water and a few small compresses of dry lint. After all bleeding had ceased, the flap was adapted to the raw surface and edges of the old nose, and fitted accurately, with plenty of freedom, not the least on the stretch. It was secured by three sutures of silk on each side, and a piece of sticking plaster across the upper part, to keep the raw surfaces there in close contact; but not too tightly, for fear of strangulating the vascular supply; for if strong pressure with the finger was applied, the whole flap became pale. The lower part of the gaping wound of the forehead was brought in contact by a needle and twisted suture; but not as low as usual, for fear of the effects of pressure on the band of cicatrix. The rest of this wound was dressed with pledgets of lint smeared with ointment. A long pledget of lint, dipped in oil, was put under the flap of the new nose.

Second day.—Doing well; the new nose quite warm; only complains of soreness of the forehead and difficulty of respiration, from the closure of the nostrils with lint, which I had had to stuff them with, as bleeding began from the edges when I withdrew the pieces of sponge.

Third day.—Complains much of pain in the forehead and soreness at the lower part, between the eyebrows and a little above it. I found this part swollen and red, and the needle pressing into it. I therefore withdrew the needle, rotating it and using careful traction, so as not to disturb the adhesions, did any exist.

Fifth day.—The parts were very uncomfortable, with a hot, sore feel of the forehead. The dressings were all removed. Adhesion had taken place all along the line of the new nose at each side; also between the eyebrows, where the parts had been brought together by the needle and twisted suture. The open wound of the forehead was greenish on the surface, and no sign of granulation; but the edges were not unusually inflamed, and the whole contracted in size. A soft bread-and-water poultice. The

plugs of lint were removed from under the flap of the new nose and from the nostrils. A fresh piece was put under the flap.

Sixth day.—When the poultice was removed, the forehead wound was red and granulating. The six ligatures were removed, the adhesion of the edges of the wounds being perfect throughout. General health and appetite good.

Twenty-third day.—As far as union and vitality, the case has done very well; but, from the destruction of all the nasal bones, and the septum in great part, the flap lies too flat; and about one-third from the bottom of the new nose there is a transverse depression, marring the outline of the nose. There is a tendency also to too close union between the inside of the nasal flap and the raw surface of the septum and the edges of the nostrils. This not only causes the depression I have mentioned, but interferes with the freedom of respiration. I therefore divided the adhesions, and plugged up the space very well, and very high, with lint. I found this operation of use; the transverse depression considerably lessened. After taking away the plug of lint, I replaced it with a triangular piece of horn, fashioned to the shape of the part, being outwardly convex, and with two small holes for strings to keep it secure. These strings, when the piece of horn was pushed up as high as it would go, were carried round the head above the ears, and fastened at the occiput. He liked it better than plugging with lint, and could breathe quite easily.

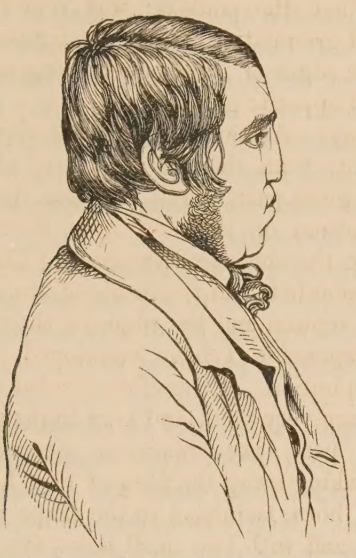
In the seventh week I divided the connecting slip at the root of the nose, and cut a bed for it, in which, after the edges had been pared, it was placed, and secured by sutures. It united at once by the first intention, except at the very tip. To show how well the new nose had been supplied by blood at this situation, directly I divided the slip a vessel as large as the labial spirted into my face.

During the latter period of healing I put first two pieces of sponge, and afterwards two pieces of large catheter, in the nostrils to ensure their openings.

The eleventh week he went home.

The nose presented a very respectable aspect, particularly in front. It was too flat in profile. At the lower third there is a tendency to the turn-up or pug-nose form. I found that this was increased by raising the end of the nose, so I determined not to put a septum. It would, moreover, not have improved the appearance, the centre small projecting piece of the flap having turned in so as to present the character of a short septum, with the openings of the nostrils on

either side sufficiently large and free for him to breathe through perfectly. He says he has the natural feel of a nose, and *can smell*



well, which he could not do before the operation, probably because respiration through the mutilated nose was so imperfect.

The flesh also of the new organ is of a good colour, a little paler,

perhaps, than usual, of the natural temperature, and of firm con-

sistence, offering in this respect another confirmation of the curious physiological fact, of the nose supporting vessels having deposited in the new nose a material approaching that of the natural organ, and thus turned a soft loose flap, as it came from the skin of the forehead into a firm fleshy structure, not far removed from the consistence of the real nose; another reason may be the contraction and necessary consolidation of the part. Altogether, therefore, the operation has succeeded very well in improving his appearance, and by facilitating nasal respiration, and restoring the sense of smell, added materially to his comfort.

Two years and five months after, I received a satisfactory letter from O'Keeffe: "If you were to see me now you would scarcely know me, as I am the surprise of all who saw me before I had the good fortune of becoming a patient of yours."

Case IV.—Thomas Taylor, aged 14, admitted into the Richmond Hospital, October 28th, 1858, with considerable deformity and diminution of the nose, from caries and necrosis of the osseous portion of the organ. Nearly two years before, he began to suffer from a discharge from the nose, and after a time a small piece of bone came away, which was followed by the discharge of several more pieces, one very large, with an increased flow of matter, but little pain, except one large piece, which hurt him severely, cutting the edges of the nostril, and causing a good deal of bleeding.

Last May he perceived a discharge from the palate, a hole came there, and finally a loose bit of bone was felt and pulled away; it was long and thin. The bony and cartilaginous supports having been destroyed, the shape of the nose is gone; it is quite flat to the face. The tip of the nose is represented by a small pale papilla in the centre, with deep ridges on each side, particularly the left, where the soft part of the nose is, as it were, folded to that side. These soft parts, however, with the lateral cartilages, are healthy looking. Under the papilla in the centre is an opening into the nose, representing, as it were, a single central nostril; through this there was a little yellow discharge, but no diseased bone internally was discoverable. There was a hole in the hard palate.

He was a delicate looking little fellow, with a head disproportionately large for his neck.

It was a very unfavourable case for operation, as the absence of the nasal bones and any portion of the cartilaginous septum deprived me of any support for a flap; but both the boy, who was very

intelligent, and his mother were anxious that something should be done, I therefore reluctantly consented. I resolved to make the centre papilla of the old nose a support for the flap of the new one; it was the only part I could use for this purpose, from the depressed, wrinkled, and irregular surface of the other soft parts left of the old nose.

March 10th, 1859.—I operated in the usual way, except that from the inside of the upper third of the lateral incisions I carried obliquely down on each side two incisions which met at the lower part of the central papilla, so as to isolate a triangular piece of the integument in the centre, which, being removed, left a more extended raw surface for the flap from the forehead to rest upon. When this was turned over, it was found to fit accurately down the sides, leaving the centre loose and unstretched, flapping slightly to and fro with inspiration and expiration. Three ligatures were put in on each side, the two lower of silk, the upper of silver wire, fastened by perforated shot. A strip of lint, wet with oil, was gently put up the nose at the lower part of the flap. Across the upper part of the flap of the new nose a piece of sticking plaster was drawn, so as to press the two raw surfaces in contact there close together. Before I settled the flap, I dressed the wound on the forehead from which it had been taken, to lessen the quantity of blood lost, as it bled freely. The lower and narrower end of this wound I brought into apposition by a needle and twisted suture, and above this with a single suture. The remaining open part was dressed from the bottom by pledgets of lint smeared with simple ointment. Waiting for the hemorrhage and also the vomiting from the chloroform to cease before the parts were arranged, rendered the operation tedious. Even after he was put to bed he vomited, but happily without disturbing the dressings.

Third day.—Union has taken place along the sides, except in one spot on the left. The new nose looks remarkably well, and his appearance is already improved by it.

Fourth day.—As the union appeared everywhere firm (except at the spot already mentioned) I removed all the ligatures. It was remarkable how little irritation existed where the silver wire ligatures were. There was a strong contrast in their favour.

Seven weeks after the operation the union was everywhere complete, and the new nose confirmed in its vascular supply, firm, and full of vitality. I divided the root of connexion, pared its edges, and fixed it in an incision made to receive it in the soft parts

at the root of the nose. It was fastened by two sutures; one side united by the first, the other by the second, intention. Some weeks after I tried to form a septum from the upper lip, and united it to the projection at the lower end of the flap of the new nose (left for the purpose) by silver ligature. He complained a good deal when the needle perforated the end of the new nose, showing its sensibility. The new septum united for a few days, and then shrivelled away; and, as it did not seem essential to the appearance of the nose, I thought it best to make no further attempt to make one.

The woodcuts will show the extent of the destruction of the nose, and consequent great deformity; and the improvement in his appearance by the restoration.

I got a letter from Taylor two years afterwards, saying, "I am getting on very well, and the mark in my forehead is gradually decreasing every day; and my nose is much better than when I left Dublin."

Case V.—Mary Neil, aged 18, a stout young woman, admitted with lupus of the nose, which had already destroyed that organ. The whole of the cartilaginous structures, both alæ and septum, were gone. The septum was destroyed even within the nose, and there is still ulceration in the remains of it. The sides have cicatrized, except at one spot within the lateral pillar of the nose; but the ulceration is not extensive. The left nostril is contracted by adhesions, and is one-third less than the other. The right nostril also appears a little lessened by adhesions at the bottom. From this cause, and the swelling of the remains of the septum round the ulcer, the passages of the nose are considerably diminished—an instinctive provision of nature (whose similar operations the surgeon has so often to admire) to make up for the destruction of those parts which covered and protected the interior of the organ of smell. There is a belt of that deep scurfy redness across the bridge of the nose, so common in these cases; it extends to the cheeks, and terminates in an ulcerated margin—the ulcers small, superficial, and yellow, of a semilunar shape, the outer edge sharp and distinct, and some are covered with a greenish scab.

Taken altogether, the complete destruction of the two lower thirds of the nose flat to the face, the exposition of the interior, the

red, scurfy, ulcerated patch over the nose and cheeks, constituted a repulsive deformity.

She was ordered an ounce of the decoction of scrophularia nodosa, with five grains of the hydriodate of potash, three times a day. The ulcerated parts were touched with the potassa fusa.

But, in spite of this and other treatment, the ulceration at the roof of the nose proved very obstinate, and it was only some months after admission that I could operate. I allowed her to remain two months well before I did so, and then her health was excellent.

December 5th, 1860.—I need not dwell on the steps of the operation, which presented nothing unusual, except that, after the stump of the nose had been made raw, the bleeding was very free, being kept up chiefly by a small artery in the lower left angle, which required strong continued compression with a cold wet sponge to stop it, as I was anxious to avoid ligature. The forehead wound bled also very smartly, but was quickly restrained by iced water. Indeed, with the exception of the small artery, the hemorrhage in this case, though violent, was more rapidly checked by this method than usual. Six silver-wire sutures were used to secure the nose-flap.

December 8th (third day).—Has gone on well, only occasionally slightly hysterical. The union of the new nose appeared firm and

complete—the nose itself warm and natural in colour. The wound also between the eyebrows had united; so I removed the two needles and twisted suture there. The silver sutures were removed

a few days after; and in about a month the connecting slip was divided, pared, and put into a bed prepared for it. Union by the first intention took place. In no case had I less trouble than in this one. Even in the third week (December 28th) the nose looked very natural; and she remarked, that "she saw that day what she had not seen for ten years, *the shadow of her nose on the wall.*"

The wood-cut shows how great was the deformity prior to the operation.

Case VI.—April 2nd, 1862.—I operated on Winifred Byrne. She was a short, stout young woman, the lower half of whose nose had been destroyed by lupus. The cartilaginous septum was gone, the tip, and the alæ; the cicatrized edges white and hard. The destruction had stopped at the bony septum, which is entire.

The cicatrized edges were white and hard; but the bridge of the nose, and extending across to the cheeks on either side, was red and rather scurfy. Destructive ulceration was going on inside the nose, on the remains of the septum, and inside the tip; but, under varied treatment, rendered difficult by extreme irritability of stomach, and by occasionally sending her to the country, I managed to heal the ulceration, and restore her to good general health. There were few circumstances in the operation worth detailing at length. The chloroform, which acted very well in saving suffering, made her stomach sick; but, in consequence of the precaution of no food having been taken for two or three hours previous to the operation, it caused little trouble or delay. Time was also saved by using iced water to restrain the hemorrhage. The flap, when turned down, fitted well. I could not bring the open gap left by the flap as close as usual, but dressed it with lint and spermaceti

ointment, and it healed up well. When making the flap incisions at each side of the root of the nose between the eyebrows, I found some difficulty in making them even, in consequence of her wrinkling this part up so much while the edge of the knife passed along it, although senseless from chloroform. Three ligatures were required on the right, and four on the left side. The lower ligatures were silver wire, the upper silk—which last I used in consequence of their more ready introduction. The wound nearly entirely united by the first intention. I did not remove the silver ligatures till the eighth day.

April 30th.—The twenty-eighth day I divided the root of the flap, pared the edges, and fixed it, in a bed prepared for it, by silver-wire sutures.

May 7th.—This united by first intention. The nose is getting firm and natural-looking. The centre bit retracted back, and looks like a septum.

May 10th.—She is very proud of the nose, and happy in walking about without a veil, which she always previously used. Her attention to personal appearance is shown by her now wearing a pair of gold ear-rings. She was very anxious to show the nose to her friends, so I let her go home for a week.

June 7th.—She finally left the hospital. The nose in every way satisfactory, except that, I think, it is a little too broad. It may contract somewhat and become narrower, but not much. The reason I believe to be, that the bed I made for the new nose-flap was rather too wide.

Art. X.—*A Retrospect of some Cases of Stricture of the Urethra treated by* J. Smyly, A.B., Surgeon to the Meath Hospital.

The following Cases, selected from notes taken at the time the patients were under observation, may serve to illustrate the pathology and some of the plans of treatment employed in strictures:—

REFLEX SYMPTOMS.

Many local and constitutional affections are found to depend upon the presence of stricture, the connexion of which is not very obvious. Thus, in a patient who had a chronic enlargement of the testicle, which resisted all treatment applied to the part, the scleroma was found to yield immediately after dilatation of the strictures. Neuralgia of the testicle, also, has been found to be relieved by treatment applied to the urethra.

A well-marked case of paraphlegia, occurring in a groom aged 35 years, was also cured by the removal of the stricture in his urethra. This man recovered the use of his legs so completely as to be able to resume his work in the livery stables.

Pains, supposed to be rheumatic, often depend upon the existence of stricture. A man thus affected applied for relief. He was much crippled, and could hardly raise his hands to his head. He concealed the fact that he had strictures, and that he had laboured under them for the last 20 years, because, when under treatment for them formerly, he had suffered from profuse hemorrhage. The nature of his case being explained to him, the patient consented to have the strictures dilated. According as the strictures yielded the pains disappeared.

The following is a Case of Neuralgia affecting the Anterior Crural, the Sciatic, and the Spermatic Nerves, depending upon, and cured by, the Dilatation of the Stricture:—William Manly, aged 50, a coachmaker: severe pains in the left hip and groin, also in the testicle of the same side, has strictures for the last three years; was cupped over the hip, on two occasions, without relief, and had taken Dover's powders; was fired over seat of pain, had taken tinct. of cannabis-Indicæ, &c., &c., &c.; he was taken into the hospital and treated for the strictures by dilatation: in 18 days he was dismissed, cured.

DILATATION.

The plan of cure usually resorted to is that by dilatation—simple, but persistent. This has generally been found satisfactory: it is safe, efficacious, but "dilatory."

The following is an instance of cure by "forcible dilatation." The result was successful, and the patient escaped all the evils that might have been apprehended. It was employed in imitation of the French—M. Lallemand, in particular—and is effected by employing a rapid succession of conical metallic catheters. It is very inferior to the plan of sudden and forcible dilatation advocated by Mr. B. Holt, and so admirably carried out by the ingenious instrument he has invented for the purpose:—

Stricture, of two years' standing, cured by Forcible Dilatation.—Terry Smith, aged 50, labourer: aggravated symptoms of stricture for the last two years. Had gonorrhea 20 years ago, and not since. One stricture was situated two inches from the orifice, and a second, and a closer one, six inches down.

Oct. 22nd, '38.—Had suffered from retention of urine all night; the instrument could not be passed through the strictures; some urine, however, followed on its withdrawal. The tincture of muriate of iron and the warm bath afforded considerable relief.

23rd.—Had passed a good night, and was free from suffering. A conical silver catheter was this morning forced through the stricture. This was unattended with any bad symptoms. The patient made a good recovery, and was able to leave the hospital, greatly relieved, on the 10th of November (18 days after).

The two following Cases are examples of the benefit to be derived from having a Catheter in the Stricture till Suppuration is estab-

lished:—Patrick Moore, aged 24 years, who had a stricture in the anterior part of his urethra, two and a-half inches from the orifice, for the last 12 months: for eight months he was under treatment by occasional dilatation, but the day after the introduction of the instrument the stricture was as tight as ever; when the catheter was left permanently in the urethra, so as to cause suppuration, the stricture was effectually cured.

The next was an equally successful case, and was cured two years ago. There has been no relapse:—

Case of Stricture of the Urethra, of four years' standing; Cured by Dilatation and Suppuration.—A military gentleman, aged about 30, applied at a late hour to be relieved; he was suffering great pain from retention of urine. He had contracted gonorrhea upwards of four years ago, and was never properly cured. He has used strong injections. Has been for some years in India, from whence he has just returned. An attempt was made to pass a number five silver catheter; the instrument was arrested at the stricture: a conical gum elastic bougie was introduced into the stricture, but not through it, and on its withdrawal, the water followed, and the bladder was emptied. The following morning no urine could be passed till the bougie was introduced.

The nature of his case was then explained to the patient: he was told that if he consented to keep his bed, and retain a gum-elastic catheter in his urethra, for a few days, he might expect to be cured. To this he consented. Having had a warm bath and some aperient medicine, a small gum-elastic catheter was introduced into the bladder, and secured in the urethra: on the third day, when suppuration was established, a larger instrument was substituted for the smaller one: he suffered no uneasiness from the presence of the catheter; had no rigors nor constitutional symptoms; all trace of stricture speedily disappeared; a full-sized instrument could be introduced; he was permitted to go to the country, where his health, which had been greatly impaired in India, was recruited.

This patient was heard of some months after: the cure has been permanent.

URINARY ABSCESS AND FISTULA.

The following case of urinary abscess in the perineum shows the advantage of opening the abscess early, and the bad result of

leaving a catheter in the urethra for weeks, only changing it occasionally:—

C. K., aged 40 years, 14 years ago had an abscess in the perineum, depending upon stricture; this abscess was opened by an eminent surgeon, who placed a gum-elastic catheter in his urethra, and insisted upon his wearing one for three weeks: for 14 months this patient was under treatment, having a small-sized bougie passed occasionally. The patient got wearied of this treatment, and applied to another surgeon, who passed a large-sized instrument for him: after three applications, a few days elapsing between each introduction, the fistula was healed, and the patient perfectly recovered.

Having enjoyed immunity for 14 years, he was again attacked with urinary abscess in the perineum; this abscess was opened freely, and when all inflammation had subsided, a metallic bougie was introduced, and its introduction repeated once in four or five days; very soon number 12 passed in freely, and the fistula was completely healed in less than two months: whereas, on the plan of treatment, by leaving a catheter in the urethra, no progress towards cure was made in 15 months, nor till the plan of passing large instruments, at pretty long intervals, was resorted to.

Stricture of Urethra; Fistula; Cured by Dilatation; the Fistula healed without special treatment.—Patrick Kinahan, aged 40, has had strictures for many years. Eleven years ago an abscess formed in the perineum; since then he has been going from one hospital to another. A few days since an abscess was opened in the perineum, and another opened, by sloughing, in the scrotum.

On his admission, the smallest-sized gum-elastic bougie could not be introduced into the bladder. The following day a very small instrument was passed—it was the first that was got through the stricture for the last eleven years; this was replaced by a gum-elastic catheter, number two, which was secured in the urethra, but the patient withdrew it in the evening. Much good, however, was effected, for in two days' time number five, six, and seven, metallic bougies were passed, in rapid succession, without difficulty or causing any effusion of blood; nor was this dilatation followed by rigors. The patient expressed his thanks, and said he was better than he has been for the last 12 years. He was under treatment in the hospital for 18 days; when dismissed, number 10 could be passed with great ease.

The fistulæ were perfectly healed; they required no special treatment, but closed gradually, as the strictures yielded.

PYEMIA.

Arthritis, purulent deposits, and other symptoms of pyemia are occasionally met with during the progress and treatment of cases of stricture. The following is an instance of purulent deposits having taken place, the patient recovered:—

Edward Close, aged 35, has had strictures for the last six years. The stricture will not admit even the smallest sized instrument. Patient was ordered a warm bath, strict confinement to bed, and a small blister to the perineum. Being treated for some days, on the sixth a conical gum elastic bougie was got through into the bladder. He had severe rigors in the evening, and sweated profusely at night. On the 17th day of treatment a large abscess quickly formed on the left forearm, and was laid open; a fortnight after another large abscess formed on the left buttock; this was also opened. By means of bark and wine the patient's strength was recruited; no more abscesses formed; the strictures yielded to dilatation, and the patient was dismissed, cured, having been in the hospital under treatment for 10 weeks.

CAUSTIC.

The plan of treating strictures by caustic, so much practised by J. Hunter, Sir E. Home, and their followers, is now seldom resorted to. The following is a favourable example of its use:—

Permanent Stricture of the Urethra cured by Caustic and Dilatation, Dec. 1836.—John Pearson, aged 45, a shoemaker, for the last three years has suffered under aggravated symptoms of stricture, the water coming by drops or in a small twisted or forked stream. He has to rise three, four, or five times a night; had gonorrhea but once, and that eight years ago; never used injections; for years had retention of urine which was relieved by the catheter. A firm stricture was found, $5\frac{1}{2}$ inches from orifice, which was quite impassible. Being under treatment for 14 days, and no progress made, it was determined to use the bougie, armed with nitrate of silver, as recommended by J. Hunter. The application gave some pain at the time, which afterwards increased in severity; some blood followed the application. He had a sever rigor in the evening, and passed a restless night; felt as if a burning coal was

in the perineum; on the third day after, the stream of water was fuller than it had been for a length of time. The after treatment consisted in passing bougies every second or third day. He was dismissed, apparently quite cured, being under treatment for 40 days. Four years after being dismissed from the hospital this patient was seen. He reported himself to be free from all symptoms of stricture ever since, and confided to us that he had made an advantageous marriage with a rich widow.

INTERNAL INCISION.

Stricture of long standing relieved by Dilatation, cured by Internal Incision by means of a sheathed knife.—Edward B., Esq., aged 40. He laboured under strictures for the last 15 years, brought on by gonorrhea and the too frequent introduction of instruments; his attendant insisting upon passing a bougie daily with the intention of curing a gleet. When he first applied to me he was in great distress, having to pass water every five minutes, which he could make only by drops. He resided in London, but having to travel to Dublin, he managed to accomplish the journey by having a urinal with him. His general health was much impaired; alteratives and bitters were ordered; the smallest sized catheter could not be introduced, but by patient dilatation of the anterior part of the urethra, on the 11th day of treatment, the smallest sized silver catheter was passed into the bladder. The treatment went on with various success, sometimes getting No. 5 and No. 6 into the bladder, and this sometimes followed by irritability, and almost by retention of urine, always relieved by a warm bath. He returned to London, having been under the "dilatory" treatment for six months; he was able to retain his urine and pass it in a good stream. No. 6 could be passed into the bladder with great ease. He resolved, however, to place himself under the care of Liston, who, he writes "having passed No. 5, determined to cut the stricture longitudinally. Immediately after the division of the stricture, Nos. 5 and 6 were passed in rapid succession. I suffered severely from fever, and was delirious for several hours. My next visit proved the inefficacy (at least for the present) of this cutting catheter, as No. 5 alone would pass. No. 6, after much exertion, became wedged in the stricture; some advantage, however, has been gained." The relief obtained was permanent, as the stricture did not relapse during the two or three years the patient lived. He died of pulmonary consumption.

RETENTION OF URINE.

Retention of Urine from Stricture.—During the last 35 or 40 years a great number of cases of retention of urine have been brought into the Meath Hospital, and in not a single instance was it found necessary to resort to tapping the bladder.

The usual practice is to place the patient in a warm bath; in some cases to apply leeches to, or to cup, the perineum; to give from 10 to 30 drops of tincture of muriate of iron, sometimes combined with laudanum, every ten minutes; a grain of ipecacuanha repeated every hour, has, in some cases, been very successful: when these means have been tried for some time, the catheter, or bougie, is used cautiously, some of the patients being put under the influence of chloroform.

In the following cases it was found necessary to divide the stricture with Stafford's lancetted stilette. In one of our cases there was extravasation of urine. We were not so fortunate as Mr. Stafford, who informs us that in 40 cases of permanent stricture he did not meet with a single failure. "In no instance," he says, "has there been a false passage made, nor has the cutting through the contracted part caused pain, hemorrhage, or inflammation":—

Stricture of Urethra; Retention of Urine; Cured by Cutting through it with Stafford's lancetted stilette. July, 1849.—Thomas Hogan, aged 23, has had strictures for the last four years; has never had gonorrhea, nor can he account for their occurrence. Patient was admitted into the Meath Hospital for retention of urine. On former similar attacks he was relieved by warm baths, tincture of muriate of iron, &c., but on this occasion all failed, even the smallest sized instruments were arrested eight inches from the orifice. There was no alternative but to tap the bladder, cut into the urethra behind the stricture, or, to divide the stricture by an internal section; the latter means was preferred, and the stricture was divided by Stafford's lancetted stilette; number seven gum-elastic catheter was secured in the urethra; on the third day (48 hours after the operation) the catheter, unfortunately, slipped out of the urethra; the urine, passing over the tender surface, caused a severe rigor to set in, which was followed by profuse sweating. No extravasation or other unpleasant result followed. The patient was dismisssd, cured, nine days after his admission. He went to his work, and has been seen since. He passes his water in a full stream.

Stricture of Urethra; Retention of Urine; Internal Incision by means of Stafford's lancetted stilette; Extravasation of Urine; Patient's life saved by free external incisions.—James Quin, aged 50, has laboured under strictures for 30 years; was brought into the hospital, March 26th, suffering under retention of urine: for the last 12 hours has not been able to discharge a drop, all attempts previously made to introduce a catheter having failed. On his admission into the hospital the man was put into a warm bath, and tincture of muriate of iron, ten drops every ten minutes, was given, but unsuccessfully. The obstruction was situated four inches from the orifice; this was cut through with Stafford's lancetted stilette, and a silver catheter was passed into the bladder; a large collection of water evacuated; the instrument was secured in the urethra, but, unfortunately, on the third day the catheter slipped out of the urethra, and on the sixth day there was extravasation of urine in the perineum, scrotum, and extending above the pubes and groins; an extensive incision was made in the perineum, laying bare the urethra, and two incisions were made, one on each side of the abdomen, through the integuments. This patient went on favourably. On the 14th day after the incisions were made, a gum-elastic catheter, number six, was introduced, and secured in the urethra; in three days this was replaced by a larger one, and in two months from his admission Quin was dismissed, cured.

Retention of Urine caused by Stricture of the Urethra; Internal Section by Stafford's lancetted stilette; Rheumatic Inflammation of shoulder and side; Cure.—Patrick Garvey, aged 26, labourer, strictures of two years' standing; had retention on one occasion before; has not passed water for the last 30 hours; an attempt was made by a doctor in his own neighbourhood which was unsuccessful. Warm baths, tincture of muriate of iron in 20 drop doses, &c., &c., being tried for three hours, from the time of his admission into the hospital, and no bougie or catheter being got through the stricture, it was determined to try Stafford's lancetted stilette. The stricture being divided, a silver catheter was introduced into the bladder, and the urine drawn off. The instrument was secured in the urethra, and 25 drops of laudanum were given. The instrument had to be withdrawn in 24 hours in consequence of the great scalding it caused. The third day had rigors followed by fever; fourth day, severe rheumatic inflammation in the right shoulder;

leeches and poultices were applied, and Dover's powder and carbonate of ammonia, of each three grains, were given every fourth hour. Eighth day, severe pleurodyne, relieved by cupping, &c., &c.; he passes his water freely; in a few days he was dismissed to return to his work, quite relieved both of the strictures and of the rheumatism.

The great advantage of Stafford's lancetted stilette was manifest in this case. Where the patient is affected with purpura, and likely to bleed freely from any wound, it would be a very hazardous experiment to tap the bladder.

John M'Caffrey, aged 50, unmarried, was admitted into the Meath hospital November 22, 1852, suffering intensely from retention of urine; violent paroxysms of straining came on every few minutes, attended with great suffering, but no discharge of urine. Pulse quick; skin hot; body and limbs trembling. He served for 15 years as a soldier in the East Indies, and led a dissipated life; had gonorrhea, chancres, and secondary syphilitic eruption, &c.; had also purpura hemorrhagica, and bleeding from gums, &c.; has suffered from strictures for upwards of 10 years; no instrument has ever been passed through the stricture. The patient is very intemperate, and is subject to intermitting fever; the spleen is very considerably enlarged; the gums are spongy and there are several livid spots on his skin. The usual means having failed, it is resolved to cut through the stricture with Stafford's instrument. A full sized gum-elastic catheter was then passed and left in the urethra. In 13 days he was dismissed, apparently cured.

PERINEAL SECTION.

Having witnessed the best results from Mr. Syme's perineal section in several cases, I bring forward one instance of the most obstinately relapsing stricture I remember to have ever met with, that of James Short. The others are examples of urinary abscess and fistula, treated, as such cases have always been, by free incision in the perineum, and cutting through the stricture.

Frequently relapsing Stricture cured by Perineal Section.—James Short, aged 60, a groom, has laboured under strictures of the urethra for 30 years. He has got relief from time to time by the process of dilatation, and on one occasion it was found necessary to perforate the stricture by means of a "trocar stilette" to relieve a

retention of urine. He has attended several hospitals, and having failed in getting permanent relief, he readily acceeded to the proposal to submit to the perineal section. The stricture being dilated, so as to permit a No. 2 silver catheter to enter the bladder, August 18th, 1856, the grooved staff was introduced and cut upon, as directed by Mr. Syme. On its withdrawal a gum-elastic catheter was passed and left in the urethra. The patient suffered severely from fever, attended with delirium, for a few days after the operation. In three weeks after the operation he was dismissed, cured; No. 9 silver catheter could be freely passed. He lived for a year without having had any relapse of the stricture. He died of bronchitis, September, 1857.

Strictures of Long Standing; Urinary Abscess; Opening at Umbilicus, and another in Perineo; Stricture Perforated with Trocar Stilette; and afterwards Divided by Incision from without; Cure.—Bernard Coffee, aged 49, a clerk, was brought to the Meath Hospital in a collapsed, and apparently dying state, March 16th, 1836.

It seems that he has laboured under the symptoms of strictures for about 14 years; had never submitted to regular treatment. An abscess formed at the umbilicus, which broke after five days, and discharged a quantity of pus mixed with urine, which discharge still continues; all his urine comes through this opening, and none through the urethra. A probe passed down to its very eye took a direction towards the bladder. There is a circumscribed abscess in the perineum, which commenced to form a week ago. The patient's strength being rallied by wine, camphor, and ammonia, the abscess in the perineum was freely opened, and a quantity of very fetid matter evacuated. An attempt was made to pass a small bougie, which met an obstruction at first, half-an-inch from the orifice of the urethra, but was finally arrested at the commencement of the membranous portion of the urethra at the bulb.

Thirteen years ago, this man had a complete retention of urine, which was relieved by passing the catheter.

Having been for 22 days under treatment, and his general state improved, the stricture being still impassable, it was perforated by a trocar stilette, introduced through a curved canula—a small catheter was introduced before this—all the urine passed through the opening at the umbilicus.

Shortly after this he was dismissed, with directions to attend the

dispensary, having been two months in the hospital. On the 7th of July, Coffee returned to the hospital, in the following state:—He had an acute abscess in the right side of the scrotum, a fistula in perineo, and at the umbilicus. The abscess was opened the following day. He soon after left the hospital, and was readmitted October 7th, the stricture being impassable. He had also fistula at the umbilicus, and perineum discharging urine. The perineum was converted into a hard cartilaginous mass. It was determined to cut through this mass, and divide the stricture. A sound was passed, and fortunately got into the bladder; having laid open the urethra, a gum-elastic catheter was left in the passage. 8th.—The catheter was retained for only a few hours; patient suffered from sickness of the stomach after the operation; he had a severe rigor in the evening; he is feverish this morning; the wound looks well.

10th.—Although the catheter was not introduced since the 7th, yet he passes his water through the urethra in a full stream, and none comes through the wound.

October 29th.—Number five gum-elastic catheter secured in the urethra.

31st.—Catheter caused a good deal of irritation, and purulent discharge from the urethra.

January 2nd, '37.—By means of occasional dilatation, number 10 can be easily passed. The fistulæ in the perineum and at the umbilicus, are completely healed.

In May, 1845, this patient came to the hospital to have an instrument passed; number 9 went in freely; he is in excellent health, fat and strong; he is earning his livelihood as an attorney's clerk.

Stricture of Urethra; Fistula in Perineo; External Perineal Section; Cure. June 23rd, 1852.—Joseph Goff, aged 47, for some years past has had strictures, the result of gonorrhea treated by injections; 11 months ago suffered from abscess in the perineum, and has urinary fistula ever since. There is considerable enlargement of the scrotum; no instrument can be made to pass through the stricture. Having been for some time in the hospital under the treatment, and no progress being made, it was determined to cut down upon, and through, the stricture. To effect this, a sound was introduced down to the stricture, the fore-finger of the left hand being introduced into the rectum, the point of the sound was cut down upon, the stricture divided, and the

urethra opened behind the stricture; a gum-elastic catheter number 10 was passed into the bladder.

This patient was dismissed, cured, having been under treatment for less than a fortnight.

Two years and a-half after, he was seen in the enjoyment of good health, and quite free from stricture, fistulæ, &c.

John Underwood, aged 48, a bootmaker; has had strictures for 17 years; has been in the hospital on several occasions; admitted April 2, 1839, having a fistula in the perineum, and considerable swelling of the scrotum and penis. The patient's state was so improved by gradual dilatation, and the application of lotions to the scrotum, that he left the hospital in a few days. He struggled on for seven years. He was admitted again, November, 1846, with a considerable aggravation of all his symptoms. His state was much improved by free incision into the perineum, and division of the stricture, and he left the hospital after six months' treatment very much benefited. In August, 1847, he was again taken in, having besides the fistula in the perineum, one above the pubes, and brawny hardness of the scrotum and perineum. On the 9th, the perineal section was made, and the urethra opened behind the stricture, a gum-elastic catheter was introduced into the bladder and secured there. The plan generally practised by the late Professor Porter was adopted in this case with great advantage. The catheter was first passed from the wound into the bladder, and then the handle part, the ivory top being removed, was pushed from the wound forwards through the orifice. The greater part of the scrotum had to be divided as well as the perineum, which was almost cartilaginous. The opening of the urethra was made more easily and safely by having introduced the forefinger of the left hand into the rectum.

This man made a good recovery; all the fistulæ were closed up and the strictures dilated, and in four weeks after the operation he was dismissed, cured of a complaint under which he was labouring for 28 years.

Strictures; Abscess; Extravasation of Urine; perfect recovery.—Edward Adams, aged 35, hack-car man, admitted November 18, 1839, supposed to be affected with erysipelas of scrotum, in a state of great prostration of strength, with symptoms of typhoid fever; collapsed countenance; brown tongue; feeble and frequent pulse;

occasional delirium. The perineum was found to be exceedingly hard and tense, evidently the seat of stricture; the penis and scrotum anasarcous; his urine came in small quantities giving him exquisite agony when passing. The perineum and scrotum were laid freely open. Wine, porter, &c., ordered. For last six years has had strictures and retention three times within that period, to relieve which the catheter was passed. He never submitted to regular treatment. In 34 days he was dismissed, a large sized catheter being passed into his bladder. He was directed to attend the dispensary to have instruments passed occasionally; this he neglected to do. In six weeks he was readmitted into the hospital, the stricture having relapsed, so as to resist the passing in of the smallest bougie. February 7, 1840, the stricture was perforated with a trocar stilette, and No. 5 gum-elastic catheter was immediately introduced into the bladder and left in the urethra. In a few days No. 11 was passed, and he was dismissed, cured.

This man has been frequently seen within the last 23 years, during which time he has been free from relapse or any symptom of stricture.

Art. XI.—*Cases in Midwifery.* By William J. Cox, Medical Officer to the Sodbury Union, Gloucestershire.

FACE PRESENTATION.

I was recently summoned to a woman under the care of an ignorant country midwife, who had been, I was informed, two days in labour of her sixth child. The midwife told me that the "child's behind" was presenting, and that the pains, which had been very severe for eight hours, in the second stage of labour, were rapidly declining in strength and frequency, and that there was now no advance whatever. On examination I found what I at first supposed to be indeed the breech, masked by a large presenting tumour from long-continued pressure; but continued careful manipulation enabled me to correct this false impression. I detected the nasal bridge lying obliquely across the pelvis, and then the mouth, which orifice the woman in attendance had mistaken for the female genital fissure, earlier in the labour. The *chin* was directed backward to the *left sacro-iliac synchondrosis*, tightly wedged in the pelvis; the *left* side

of the face, consequently, presenting. Having made out the position at last to my satisfaction, I turned my attention to the condition of the patient, who presented the incipient symptoms of powerless labour, so graphically described by Dr. Churchill. Restlessness, dry brown tongue, pulse 120, tendency to dark exhaustive vomiting, olive-coloured vaginal discharge. I determined, therefore, to deliver immediately, in which I at last succeeded, after some trouble and difficulty, by the vectis, as it proved impossible to pass the instrument in any direction except posteriorly, and then gliding it gradually forward. The forceps was inadmissable for this reason. The child was born living, although a hideous object for 24 hours after its birth. The mother made a good recovery.

The most important practical point connected with this case is the difficulty of diagnosis which it presented. This was, of course, owing to the great swelling which had taken place. In such cases the detection of the nose and mouth (especially the latter, with its firm line of gums) is the chief point of diagnosis. Great caution and tenderness are requisite in making the examination, otherwise serious injury will probably result to the infant.

This is the only case of face-presentation I ever saw *requiring* instrumental delivery. Two cases, occurring previously in my practice at distant intervals, terminated easily with the natural efforts, the duration of the labour not being influenced by the mal-position. In both these cases, the *chin* was towards the *right* sacro-iliac synchondrosis, and the *right* side of the face anterior. In such presentations the non-necessity of interference must be obvious, and has long since been established by Boer, Murphy, Churchill, and other authorities.

FACE TO PUBES PRESENTATION.

Mrs. M., aged 46, in labour of her eighth child, requested my assistance, in consequence of the non-advance of the head after many hours of severe suffering. The midwife had already foolishly told her "there was no help but to kill the child, it being fixed." On examination, I found the forehead behind the pubes, imperfectly filling the hollow, the anterior fontanelle very distinct, and the head entirely arrested. The pains were regular and strong. I made several unsuccessful attempts, in the intervals of the pains, to press back the head with the fingers. I then cautiously introduced the vectis from the pubic side, and endeavoured to rotate the head towards the sacral side of the pelvis. After ten or twelve minutes'

gradual and strenuous exertion, taking every possible care not to injure the soft parts of the mother, I had the gratification of finding the head was beginning to advance with the pains. The vectis was then withdrawn, and the case left to the natural powers. A living child was born half an hour afterwards. The mother did perfectly well.

PUERPERAL CONVULSIONS.

Case I.—E. R., a stout Irishwoman, 19 years of age, primipara, in her eighth month. Found her low and desponding, complaining of severe paroxysms of shooting pain through the temples, dimness of vision, with fits of transient blindness; eyes bright; tongue loaded; pulse 80, full and labouring; urine scanty and highly albuminous. Advised bleeding, which she declined. Gave a drastic purgative, and a spirit lotion to the head; to be kept quiet in a darkened room. A violent thunder-storm occurred the next day. During its continuance, I was summoned to my patient's residence, and found her in the midst of a severe epileptoid seizure. Was told she had had two before my arrival. The os uteri was closed, and there was no sign of labour. I bled her immediately to 20 ounces; she seemed better after this, but the seizures came on every quarter-hour, and she remained comatose during the intervals. After waiting two hours, I again bled her to 16 ounces; had the scalp shaved, ice applied, and gave an enema of turpentine. The latter speedily unloaded the bowels, the motions being nearly black, and indescribably fetid. Her condition, however, did not improve; and after six hours' watching, I returned home, deeming the case hopeless. In the middle of the night I was again summoned to her bedside, and told she was in labour. The fits had gradually subsided, and finally ceased three hours after my departure; but she remained in deep stupor, moaning at regular intervals. I found the os fully dilated, the waters discharged, and the head deeply sunk in the pelvis; but the pains very weak and inefficient. After some consideration, I judged it best to deliver by the short forceps, which I accordingly did, without any difficulty. Her respiration now lost its stertor, and she lay perfectly quiet, but as yet quite unconscious. Her pulse was most alarming = 160. On visiting her early next morning, I found she had become conscious, waking as from sleep, about four hours after delivery. She had no recollection of anything that had happened during the last 30 hours, nor any idea of having given birth to a child. The fetus had been dead for some days. Her recovery was rapid and complete.

Case II.—Summoned to meet a friend in consultation on the case of J. R., aged 34, in labour of her fourth child. Found her in a state of stupor, from which, however, she could be roused at intervals, so far as to evidence some consciousness to externals. Pulse 90, full and labouring; tongue loaded. A vaginal examination showed labour to be far advanced; the head on the perineum; but the progress very slow. The patient showed her consciousness of the uterine contractions by turning and moaning. My friend informed me that she had showed no tendency to a seizure until in full labour, and the os more than half dilated, when she suddenly complained of a burning pain in the temples, declared the "room was full of lights," and fell into a convulsion. Since then the fits occurred every 20 minutes, and increased in violence. He had already bled her to 20 ounces, evacuated the bowels, and applied ice to the scalp. We now took away 16 ounces more blood, and waited an hour, during which time she had two seizures of rather less severity. At the end of that time we found no progress in the labour, and the vagina getting dry and hot. We now resolved to deliver with the forceps, which I did without any force. The introduction of the sacral blade, however, induced so violent a seizure, that I was quite appalled, expecting momentarily her death. But she had no farther convulsion, and woke up about six hours afterwards perfectly conscious, but with no remembrance of her labour. Severe headache, intolerance of light, &c., which remained, soon passed away. The child, a fine boy, was dead. The patient afterwards informed my friend that when a child she had been subject to fits (epilepsy?) which had ceased at puberty. She married at 20, and when pregnant with her first child, suffered much from headache and pain in the loins, for which she was bled. After the delivery of the (first) child she lost consciousness for some time, and her midwife told her she had "made strange faces." Had had no fits during her subsequent pregnancies, but during the last suffered much from mental anxiety.

Case III.—E. O., aged 19, a very robust, plethoric, single woman, consulted me a short time since. She complained of darting pains in the head, flashes of light before the eyes, loss of memory, vertigo, nausea, and deep-seated lumbar pain. She confessed that she was in the seventh month of pregnancy, and was very low and desponding, dreading the anger of her parents, when her disgrace should be known. I advised bleeding, which she declined. Her

urine was scanty and albuminous. I gave her purgatives, recommended quietude and low diet, and acquainted her friends with her situation. Five weeks afterwards I was sent for in haste, and found her in the midst of a fearful paroxysm of the worst type. I was told that, after a restless night, she vomited some dark matter, uttered a loud cry, and was directly unconscious. As soon as the convulsion had passed, I bled her largely, purged, gave enemata, &c.; but she got sensibly worse, in spite of all treatment, and it soon became clear that death was inevitable. There was occasionally a feeble attempt at a labour-pain, but the mouth of the womb would not admit the tip of the finger. She sank, and died in the evening.

Case IV.—Consulted during the Summer of last year, by Mrs. R., a farmer's wife, primipara, aged 32; a very fine looking woman, stout, plethoric, and florid; she was in her sixth month. She told me that previous to the first appearance of the menses (in her sixteenth year), she had had occasional seizures, originally induced by fright; but that these had ceased shortly after that epoch. Shortly after her marriage, in her third month of pregnancy, she began to suffer from dull headache and lumbar pain, which gradually got worse as time advanced. She now had obtuse and constant pain at the vertex and forehead; giddiness; occasional confusion of thought; ringing noises in the ears; and severe aching of the back. Her ankles were somewhat œdematous, and her legs hot and tender. Her urine was scanty, opalescent, dark, and albuminous. Her pulse was rather full, labouring, and infrequent. There was great drowsiness, and mental despondency, without any external cause. I bled her; prescribed calomel and jalap, and the strict observance of a low regimen; she rapidly improved. The albumen nearly disappeared from the urine, and the head symptoms improved so much that my attendance was discontinued. Three weeks afterwards I was again suddenly summoned, she had just had a genuine convulsion, with great distortion of the countenance. I again bled her and applied cold to the head. After eight seizures, gradually decreasing in severity, she rallied; labour came on, and terminated naturally in six hours in the birth of a dead seven months' child. The recovery of the mother was rapid and complete; is now again pregnant, without any bad symptoms.

Case V.—I was called in consultation three years since on a case of convulsions during labour. The patient was a short, stout,

resolute primiparous Irishwoman. The fits were most severe, and had been so for some hours, ever since the commencement of labour. She had already been bled to 50 ounces, with little abatement of the violence of the attacks, or relief of the dangerous comatose condition of the intervals; the bowels also had been freely purged; the os was dilated to the size of a crown-piece, and the head presented *with the fore-arm placed across the back of the head.*[a] It was now debated whether to deliver by the forceps or version, and finally decided in favour of the latter operation. After great difficulty I succeeded in delivering a still-born child. The pelvis was roomy, but the perineum rigid. Previous to operating I, of course, introduced the catheter and drew off some urine; which was afterwards found to be highly albuminous. The patient had a horrible seizure during the version, but none after the delivery. She regained consciousness in two hours; and recovered slowly, but satisfactorily.

RUPTURE OF THE UTERUS.

Case I.—T. T., aged 37, in labour of her sixth child. Membranes ruptured at the beginning of the labour, and an enormous quantity of the waters discharged. Pains continued regularly, but rather weak in character, for about three hours, when they ceased, and a severe continuous pain took their place; after which no advance was made in the labour. The patient soon became restless and anxious, and I was sent for. I perceived at once, from the expression of the features, that some perilous casualty had occurred; and this opinion was strengthened by the state of the pulse, which was feeble, tremulous, and, at least, 150. She complained of a severe fixed pain in the pelvis, but could not date this from any labour-pain of extra severity. Indeed, she described the pains as having been feeble from the first—very different to her former labours. On examination no presentation could be reached; the os was but little dilated; there was hemorrhage from the vagina. Under these distressing circumstances, what could be done? Interference appeared impossible. I felt satisfied there was a laceration of the uterus. The poor woman, as long as she was conscious, expressed herself resigned to her fate, which she felt to

[a] So far as I know, only one case of this singular compound presentation has been recorded. See Dr. Simpson's Obstetric Works, Vol. i, p. 488.

be inevitable. She died in collapse two hours afterwards. To my extreme regret, the friends would not consent to an autopsy.

Case II.—Mrs. C., aged 27, seven months pregnant of her first child, accidentally fell down a steep flight of stairs, and received a very severe shock. On recovering partially from this, she complained of excruciating pain in the abdomen; and vomiting, at first merely of the ingesta, but afterwards of green, and finally of "coffee-grounds" matter. On visiting her 20 hours after the accident, I found her already *in extremis*, with fluttering pulse, sighing respiration, cold extremities, &c. There was no external hemorrhage. The head of the child could be readily felt through the presenting membranes. She soon afterwards died. On opening the abdomen 12 hours after death, blood, to the amount of nearly two quarts, was found effused into the peritoneal sac; the uterus was ruptured at its fundus, to the extent of three inches; the edges of the wound being jagged and fully an inch asunder; the placenta was exposed by the laceration, which it entirely covered; the tissue of the uterine walls for some distance around the torn part was exceedingly soft, and almost as thin as card-board; it emitted an offensive odour, and was apparently in a gangrenous state. The child was a fully developed male. The mother had been the subject of syphilis previous to her marriage.

PUERPERAL FEVER, WITH SLOUGHING OF THE VULVA AND VAGINA.

Two years since, an apparently healthy primipara, aged 19, residing in a healthy village, and well nourished, was delivered by me of a living male child, after a perfectly natural labour of 16 hours' duration; 12 of which were occupied by the first stage. Neither the vagina nor perineum were unduly rigid. Four days after delivery she was seized with diarrhea and slight abdominal pain. The next day nausea, anxiety, and general prostration set in. The vaginal discharge became horribly offensive; and, on examination, an œdematous redness was observed in the labia. This rapidly extended, and in two days sloughs formed on the interior of the vulva and vagina, showing no disposition to become limited by the inflammatory process. The constitutional symptoms kept pace with the local mischief; vomiting, delirium, and hopeless collapse supervened, spite of all treatment No doubt, the gangrene extended to the uterus, for the patient died with all the

symptoms of malignant puerperal fever, complicated with metroperitonitis. There had been no epidemic of any kind in the neighbourhood for a long time previously. The poor woman had felt great dread of her approaching confinement; and, singular to tell, shortly after her delivery (when no untoward symptom whatever was present), had expressed to her friends a strong presentiment of her rapidly approaching fate.

I shall not tresspass with any lengthy apology for the publication of the foregoing cases. They are a truthful and unpretending record of actual practice, and I trust, may be deemed worthy perusal.

Art. XII.—*On the Natural Constants of the Healthy Urine of Man.* By the Rev. Samuel Haughton, M.A., F.R.S., Fellow of Trinity College, Dublin, and of the King and Queen's College of Physicians in Ireland.

(*Concluded from Vol.* xxx., *p.* 18.)

Part V.—*The Daily Discharge of Sulphuric Acid in Healthy Urine of Man.*

Although I cannot believe that sulphuric acid and chlorine possess a value at all comparable with that of urea, in the excretions of the human body, yet it is necessary to estimate their amount in order to complete my account of the Natural Constants of Human Urine. I strongly suspect that sulphuric acid discharged in urine is the measure of the alum we eat in our bread, rather than of the excretion of the sulphur tissues of the body; and I am quite certain that the chlorine is the measure of the salt we eat with our food ; and, consequently, I can attach only a secondary importance to the amount of such substances excreted. I have, however, endeavoured to determine their amount, with as near an approach to accuracy as is possible in such an investigation.

I divide my subjects, as before, into Well-fed and Vegetarian, with the following results:—

TABLE N.—*Discharge of Sulphuric Acid per day (Beef-eaters).*

No.	Sulphuric Acid—SO_3	Body Weight
1	41·85 grs.	126 lbs.
5	34·20 grs.	189 lbs.
6	40·75 grs.	145 lbs.
Mean	**38·93** grs.	**153** lbs.

TABLE O.—*Discharge of Sulphuric Acid per day (Vegetarians).*

No.	Sulphuric Acid	Body Weight
2	40·65 grs.	132 lbs.
3	18·88 grs.	146 lbs.
4	23·50 grs.	146 lbs.
5	21·00 grs.	132 lbs.
Mean	**26·01** grs.	**139** lbs.

From both these tables it appears that there is no proportionate relation between the weight of the body and the excretion of sulphuric acid.

The numbers refer to the same persons as those whose excretions were described in the former parts of this paper.

The total mean discharge of sulphuric acid, taking both tables into account, is **31·55** grs. per day, or at the rate of **0·214** grs. per day per pound of body-weight.

PART VI.—*The Daily Discharge of Chlorine in the Healthy Urine of Man.*

The following tables contain the results of my observations on the discharge of chlorine:—

Table P.—*Discharge of Chlorine per day* (*Beef-eaters*).

No.	Chlorine	Body Weight
1	26·30 grs.	126 lbs.
2	49·52 grs.	126 lbs.
3	12·70 grs.	126 lbs.
4	40·00 grs.	174 lbs.
5	79·20 grs.	189 lbs.
6	36·08 grs.	145 lbs.
1 bis.*	77·63 grs.	126 lbs.
5 bis.*	99·67 grs.	189 lbs.
6 bis.*	133·05 grs.	145 lbs.
Mean	**61·87** grs.	**149·5** lbs.

The analyses marked (*) were made by weighing the chloride of silver formed by adding nitrate of silver to an acid solution of the urine; and give results much greater than those obtained by Liebig's volumetrical process, which was employed in the earlier experiments. The mean of the results found by the more accurate method of weighing is **103·45** grs. of chlorine per day. The total mean of these, and of Table Q, is **106·56** grs. per day. I have adopted this result in Table T. The corresponding mean per day per pound of body-weight is **0·673** grs.

A comparison of the quantities of chlorine discharged by the same persons, on different days, shows how completely it depends upon accidental circumstances, such as eating salt meat or fresh meat.

Table Q.—*Discharge of Chlorine per day* (*Vegetarians*).

No.	Chlorine	Body Weight
1	115·90 grs.	173 lbs.

The general mean discharge of chlorine, taking both these tables into account, is found to be **67·00** grs. per day; or (since the average

weight of body is 151·9 lbs.) at the rate of 0·452 grs. per day per pound.

PART VII.—*The Daily Discharge of Extractives in the Healthy Urine of Man.*

Under the term extractives are included all the organic compounds of the urine, not urea or uric and hippuric acids; their amount is readily found by subtracting from the total solids of the daily urine, the quantities already determined, with the bases added to the acids. If we know, for each specimen of urine, its urea, uric acid, fixed salts, and total solids, we can find the extractives by subtracting the sum of the first three from the fourth.

In this manner the following tables have been constructed:—

TABLE R.—*Fixed Salts and Extractives Discharged per day by Beef-eaters.*

No.	Fixed Salts	Extractives, &c., &c.	Weight
1	238·00 grs.	113·14 grs.	126 lbs.
2	244·62 grs.	131·94 grs.	126 lbs.
3	234·00 grs.	118·89 grs.	126 lbs.
4	160·00 grs.	96·60 grs.	174 lbs.
5	405·00 grs.	289·91 grs.	189 lbs.
6	297·25 grs.	268·99 grs.	145 lbs.
Mean	**263·14** grs.	**169·91** grs.	**147·7** lbs.

TABLE S.—*Fixed Salts and Extractives Discharged per day by Vegetarians.*

No.	Fixed Salts	Extractives, &c., &c.	Weight
1	384·30 grs.	260·60 grs.	173 lbs.
2	421·20 grs.	236·15 grs.	132 lbs.
3	261·00 grs.	134·81 grs.	146 lbs.
4	249·20 grs.	99·28 grs.	146 lbs.
5	252·30 grs.	177·71 grs.	146 lbs.
Mean	**313·60** grs.	**181 71** grs.	**148·6** lbs.

From the preceding tables it appears that the general average of fixed salts per day is **286·08** grs.; or, at the rate of 1·932 grs. per day per pound of body-weight.

And the discharge of extractives is **175·27** grs. per day; or, at the rate of 1·183 grs. per day per pound of body-weight.

If we now collect together into one table the general average of all the results obtained in the course of this investigation, we find the following:—

Table T.—*Natural Daily Constants of the Urine of the Average Man, including both Beef-eaters and Vegetarians.*

Excretion	Per Day	Per Day per Pound
Urine, . . .	52·62 oz.	2·84 drachms.
1. Urea, . . .	493·19 grs.	3·331 grs.
2. Uric Acid, . .	3·15 grs.	0·021 grs.
3. Phosphoric Acid, .	32·36 grs.	0·218 grs.
4. Sulphuric Acid, .	31·55 grs.	0·214 grs.
5. Chlorine, . .	106·56 grs.	0·673 grs.
6. Extractives, . .	175·27 grs.	1·183 grs.
7. Balance (viz., inorganic bases),	115·73 grs.	0·827 grs.
Total Solids, . .	957·81 grs.	6·467 grs. per lb.

In all the preceding investigations I required the subjects of them to live according to their usual mode, without any deviation from the regular habits of daily life, for a period of from five to seven days before that on which I estimated the constants of their urine. In this way I believe that I have succeeded in obtaining results, the accuracy of which is superior to that of those found by preceding observers. The following summary will show the method of analysis employed.

I. *Urea.*—This was determined by Liebig's volumetrical process, the test solution of nitrate of mercury being estimated by a known weight of pure urea previously prepared.

II. *Uric Acid.*—This, as well as hippuric acid, was found by weighing directly—the decomposing acid being muriatic.

III. *Phosphoric Acid.*—This was always ascertained by direct weighing, as pyrophosphate of magnesia.

IV. *Sulphuric Acid*—This was also found by direct weighing of the sulphate of barytes formed.

V. *Chlorine.*—I regret much, that in my earlier experiments, I was induced, in estimating chlorine, to employ Liebig's volumetrical process, with nitrate of mercury, which I have not found to be trustworthy. Before I discovered my error several of my subjects of experiment had gone beyond my reach. I have endeavoured, however, to correct my first estimates in the case of three subjects, by direct weighing of the chloride of silver.

VI. *Extractives.*—These were found by subtracting the sum of the urea, uric acid, and fixed salts, from the total solids of the daily urine.

VII. *Total Solids.*—These were estimated by drying a known bulk of urine at 212° F., and weighing the residuum. The results obtained fully justify the future employment of Dr. Golding Bird's formula.

VIII. *Fixed Salts.*—These were ascertained by igniting the preceding residuum, and weighing the ignited ash directly.

I venture to offer the final result of my long investigation, in Table T, as a close approximation to the Constants of Daily Urine in a Healthy Man.

APPENDIX ON THE NUTRITIVE VALUE OF OATMEAL BROTH AND BEEF TEA.

In the former part of this paper (Vol. xxx., pp. 2, 3), and in a paper on Diabetes Mellitus (Vol. xxx., p. 323), I have given the results of experiments made to determine the nutritive value of various kinds of food, estimated as urea or nitrogen. I wish to add here the results of a careful analysis of the *oatmeal broth* and *beef tea* used in the Meath Hospital, as they appear to me to throw some light on the disputed question of the value of beef tea as a diet.

I.—*Oatmeal Broth.*

The oatmeal broth of the Meath Hospital is made by the "rule of the eye and hand;" but a careful weighing of the quantities used, made for me by Mr. A. W. Foot, on several occasions, has led to the following formula:—

"Each quart of the oatmeal broth corresponds to 3 oz. 5 drms. of oatmeal, and a quarter of a pound of beef without bone."

The oatmeal is served to the patients with the broth, but the meat is generally witheld, in mercy to the digestive powers of the patient. Those, however, whose stomachs are in sufficiently good tone to digest well, have discovered the value of the beef as an addition to the broth, and have, in fact, practically made the analysis here detailed, the result of which shows that a quart of the broth possesses less urea-producing power than a quart of porter or a pound of boiled cabbage.[a] I found that 10·5 oz. fl. of broth weighed 4566 grs.; and that, when evaporated to dryness at 212° F., it left a residuum of 238·8 grs., of which, 50 grs. burned with soda-lime gave me 8·14 grs. of platinum.

Hence I find:—

	1 qt. broth.
1	40 oz. fl. broth.
105	2388 grs. @ 212° F.
5000	814 grs. platinum.
7	1 gr. nitrogen.
28	60 grs. urea.

45·33 grs. urea.

II.—*Beef Tea.*

The beef tea of the Meath Hospital is made on the liberal scale of one pound of beef, without bone, to the quart.

Of this tea, 8½ oz. fl. weighed 3694 grs.; and, when evaporated at 212° F., left of solid matter 69·6 grs., of which, 69 grs. burned with soda-lime gave 39·04 grs. of platinum.

From these data we have:—

	1 qt. beef tea.
1	40 oz. fl. beef tea.
85	696 grs. @ 212° F.
6900	3904 grs. platinum.
7	1 gr. nitrogen.
28	60 grs. urea.

56·74 grs. urea.

[a] The piece of meat is eagerly sought by many of the patients, and is familiarly and affectionately called by them "*the mouse.*"

This is almost exactly the same value as that found for a quart of Guinness's XX Porter, and for a pound of cabbage or cauliflower boiled; while it is only one half the value of a quart of Dublin milk, and less than one-third of the value of a quart of milk taken from the cow.

Art. XIII.—*Cases in Surgery.* By Edward Hamilton, M.D., F.R.C.S.I., Surgeon to Steevens' Hospital.

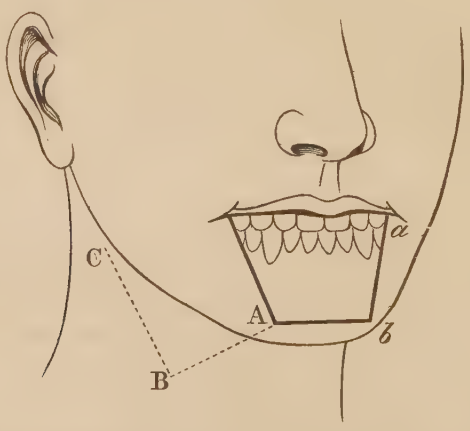
1. cheiloplastic operations. 2. ligature of brachial artery.

Case I.—*Extensive Destruction of the Lower Lip.*

J. T., aged 62, was admitted to Steevens' Hospital, May 22, 1861, presenting a truly painful and distressing appearance. The lower teeth were completely exposed; saliva, mixed with a foul discharge, flowed freely from his mouth, which he was always obliged to keep covered with his handkerchief; the lower lip was extensively destroyed by cancerous ulceration; the loss of substance extending from the right commissure obliquely toward the chin, and from the left commissure, in a vertical direction, to the base of the jaw, the surface presenting the characteristic features of ulcerated epithelioma and showing a tendency to become fungated, so as to overlap these boundaries, and convey the idea of even still greater destruction. The exposed gum presented a granular appearance; there was no evidence of glandular contamination, nor was his health impaired. He stated that the disease commenced, about twelve months since, with a small hard pimple toward the left angle. This continued gradually increasing in size and hardness for three months, when he applied for medical advice. Some caustic was applied, which caused an extensive slough and apparently eradicated the disease; but after the lapse of six months the lip again became very painful and swollen; he now could feel a "hard lump" inside the lip, and he again applied for relief, but not to the same practitioner. Caustics were applied several times without producing any good effect; the sore increased rapidly in size and hardness, and some months having elapsed in this way, he determined on coming to Dublin. He is not a habitual smoker.

He expressed a strong desire to submit to any operation which would afford him relief from his present distressing condition; the absence of glandular enlargement and constitutional cachexia, induced us to reflect carefully how far the resources of surgical art could be made available. The first and all-important proceeding which demanded our attention was the complete removal of the diseased structure. The second, to devise a plan by which the loss of substance could be supplied, so as to obviate deformity as well as the injurious consequences likely to result from the continual escape of saliva.

Reflecting on the shape of the gap which would result from the complete extirpation of the diseased structures, there appeared but one plan by which it could be satisfactorily filled. Reference to the accompanying wood-cut will explain the proceeding adopted. Incisions were made, free of the diseased tissues, leaving a gap as at A *b a;* incisions were carried into the neck from the point A, so as to form a flap, A B C, which was freely dissected up The cheek, at *a b*, was now well detached from the gum and lower jaw; the coronary arteries were tied with fine ligatures, which were cut short at both ends; the flap was now accurately adjusted and maintained in position by a few points of twisted suture, the edge B A, being united to *a b*, and C B to A *b*. No difficulty was experienced in closing the angle C B A, owing to the laxity of the integument of the neck, usual at this period of life, the edges C B, and B A coming easily in contact.



Warm spirit lotion was applied to the flap, which readily accepted union by the first intention, except a small point of the

upper angle, which subsequently became filled with granulation structure, and, contracting, rendered the new lip perfect. On the third day the parts were supported by a Hainsby's truss, and the needles removed, and after some days he left the hospital quite happy and pleased with the marked improvement in his appearance and condition. A recent account from him records that there has been no return of the disease.

Case II.—H. K., age 60, was admitted to Steevens' Hospital, July 23, 1862, presenting extensive ulceration of the lower lip, extending from the left commissure to the base of the jaw. In form and appearance the disease was remarkably like the case just related. He states that more than two years ago he observed a small "pimple" at the angle of the mouth on the lower lip, which, having been picked, bled freely, and several attempts were made to cause the removal of the disease by escharotic "plasters" but without any satisfactory result. There was no enlargement of the lymphatic glands.

In this case, too, the knife was freely used, cutting clear of the diseased tissues. A quadrangular flap was raised from the neck, as in the last case, the entire extent of which united fairly by the first intention. The needles and stitches were all removed on the third day, and he left the hospital in a week after the operation.

Case III.—T. L., aged 55, was admitted to Steevens' Hospital, August 16, 1862, labouring under extensive ulceration of the left labial commissure. The disease occupied, comparatively, a small extent on its external surface, so as to give hopes that it might be removed by a simple V incision, but more careful examination revealed that it occupied a much more extensive area on its deep aspect; so that when incisions were made, well beyond all the limits of the disease, no amount of strain, consistent with the vitality of the parts, could approximate the edges. A square flap was, therefore, quickly dissected from below the chin, and brought forward to close the space, and was easily retained, without any strain, in its position. In the course of an hour after the operation smart bleeding occurred—a ligature having slipped from one of the arteries, and it became necessary to open the wound in order to secure the bleeding vessel. Notwithstanding this, the flap united well, except a small angle above, and the patient left the hospital 14 days after the operation. In this case I was strongly opposed

to operation, as the glands were extensively enlarged, and it was undertaken only at the earnest entreaty of the patient himself, in the hope of obtaining even a temporary respite from his sufferings. The enlargement of the glands had entirely disappeared before he left the hospital.

Case IV.—T. J., aged 65, admitted Sept. 6, 1862. He stated that the disease commenced some years ago as a wart, which, having been repeatedly removed by ligature, at length spread by ulceration. Within the last three months this has been most rapid, and more painful than epithelioma usually is. The disease now occupies the left labial commissure, extending back as far as the masseter muscle, and for some distance along the border of the lip, beyond the mesial line: downwards it extends to the base of the lower jaw. It is hard at the edges, occupying a larger extent of the mucus surface than the skin. There was no enlargement of lymphatic glands.

He expressed a strong desire to have the disease removed, and incisions were accordingly made, removing the whole of the unhealthy tissues. When the edges of the outer angle were brought together, a considerable space still existed; a narrow, rectangular flap was brought from below the chin; the bleeding-vessels were carefully secured; the ends of the ligatures cut short, and the flaps maintained in position by twisted and interrupted suture. The needles were withdrawn on the day following the operation, the stitches after another day. The union was perfect throughout.

He left the hospital in a week after the operation.

The operation performed in these cases differs a little from that with diverging incisions below the chin, recommended by Mr. Syme, which will answer admirably where the loss of substance presents a V shape, and extends down towards the lower part of the symphysis: but of the cases which have presented themselves at Steevens' Hospital, and they are exceedingly numerous, I have not seen any which have assumed this definite outline, as the disease, without exception, extends to a much greater depth, and involves much more loss of substance on one side than the other, and so far as my experience teaches me, engages the left more extensively than the right side, in a considerable majority of instances.

Every practical Surgeon is aware how frequently this disease returns, and I think we can explain this, in many cases, by the limited nature of the incisions—the golden rule of cutting into the

healthy structure not being sufficiently kept in view. If the surgeon comes to the operation impressed with the idea that by the free use of the knife he will be able to adjust the parts satisfactorily, it affords him much encouragement to act boldly, and not to leave a trace of disease behind.

Two matters claim special attention; one is, carefully to tie each vessel as it bleeds with a fine ligature, cutting the ends short, as the ligatures passing through the wound prevent union, and subsequently cause ulceration in the tender line of adhesion. The second is, not to make the flap too thin in its substance. Care should be taken to dissect up the subcutaneous tissue freely with the skin, as wherever the dark dots of hair follicles are seen, that point is almost sure to lose its vitality.

Aneurism of the Ulnar Artery—failure of treatment by compression —ligature of the brachial artery—recovery.

T. O., about 34 years of age, a labourer, presented himself on the 12th of May at the Dispensary of Steevens' Hospital, complaining of stiffness and pain in the right forearm, increased by exertion or the depending position. Very little alteration was observable in the limb, with the exception of a slight fulness, accompanied by a deep-seated and obscure sense of fluctuation, conveying something of the idea of chronic abscess. No pulsation was perceptible in the enlargement. He was a very strong man, occupied in the laborious pursuits of a porter, and was rather intemperate in his habits. He had club feet.

On the 17th of May he again presented himself at the Hospital. The swelling of the forearm is now distinct and prominent; pulsation is visible, and may be felt over the entire tumour; a well-marked soufflet is distinctly audible; pressure on the brachial artery stops the pulsation and diminishes the tension of the tumour, which gives the characteristic thrill on the sudden removal of the compression. The pulse in the ulnar artery is very feeble, and the radial artery can be traced coursing over the surface of the tumour. The girth of the right forearm exceeds that of the left by one inch and a-half.

The case was manifestly an aneurism of the ulnar artery—examination of the heart afforded distinct evidence of aortic valvular disease—it was resolved to try compression, which was carried out from the 17th of May to the 26th June, on an average

7 to 10 hours daily, combined with digitalis, sulphuric acid, perfect rest, small quantity of fluid, rich solid food, and ice to the tumour. Two or three times in the course of this treatment great hopes were entertained of its success, as the pulsation and soufflet were observed to cease. On one occasion this change was accompanied with a peculiar tingling pain along the fingers and round the elbow, apparently produced by the establishment of collateral blood channels, and when the tumour was examined, neither pulsation nor bruit could be detected, but when we returned from the adjacent ward both had completely reappeared.

On the 4th June he was suddenly seized with most intense pain in the tumour, extending along the forearm to the fingers; this pain lasted for six hours, and was of so severe a character as to render him almost delirious. This pain produced very little change in the forearm, but was attended with a slight increase in size; he was relieved by the local application of the chloroform and aconite liniment.

On the 26th of June it was determined to try the treatment by flexion, and the forearm was bent on the arm and retained in its place by a flannel band. This position diminished the flow of blood through the aneurism, and was retained, with occasional intervals. The patient complained much of it as causing pain and restlessness, and it was laid aside after eight days.

One point of the tumour now appeared discoloured on the inner side, and gave a decided sensation of a very thin wall—the case thus becoming very critical. We had, on the one hand, the disease rapidly becoming diffused, and liable at any moment to entail the loss of the limb, or compromise the patient's life; and, on the other, a very strong presumption that the brachial artery itself was diseased, and in an unfavourable condition for the application of a ligature. On consultation it was decided to be our duty to give him the benefit of the chance which the ligature afforded, and, accordingly, he was left without further treatment, the forearm supported in a flannel roller, until the 12th of July, when I proceeded to tie the brachial artery, at the junction of its middle and lower third, being anxious to leave as much space as possible above the operation, in case amputation should be subsequently demanded.

A free incision was made along the inner edge of the biceps muscle, avoiding the basilic vein. No difficulty was experienced in finding the vessel, which was a little darker in colour than usual, probably owing to the effects of the compression; its pulsa-

tions at first were distinct and vigorous, but after a few seconds' exposure they ceased almost entirely; and it was ascertained, that when the ligature was applied, all pulsation ceased in the tumour, a point about which there was much anxiety, the superficial course of the radial artery raising a presumption that a high bifurcation of the brachial existed. In the steps of the operation I was materially assisted by the kindness of my colleagues, Mr. Colles and Mr. Wilmot.

Cardiac disease having been detected, chloroform was dispensed with; he was placed in bed, the arm supported and enveloped in flannel. No pulsation could be felt in the tumour or either of the arteries of the forearm; the temperature of the limb was considerably reduced. He passed the day of the operation quietly, slept well that night, and on the following day the temperature gradually rose somewhat above that of the other side; pulsation returned in the radial artery, but none in the tumour; the circumference of the arm was diminished $\frac{3}{4}$ of an inch. The wound healed by the first intention, with the exception of the opening for the ligature, which was not detached until the 18th day after the operation, an elastic band having been attached to it on the 16th day, so as to maintain continuous gentle traction. On the 28th day after the operation he left the hospital; and now enjoys perfect use of the limb, which presents very little appearance of enlargement.

Art. XIV.—*On the Treatment of Stricture by the "Immediate Plan."* By Rawdon Macnamara, M.R.I.A., Professor of Materia Medica, &c.; Member of Council R.C.S.I.; one of the Surgeons to the Meath Hospital, &c., &c.

Were I asked to mention the individual disease on which most has been written by ancient and modern surgeons, I should unhesitatingly say—stricture of the urethra. From Hunter's day especially, down to our own, there is scarcely a writer on surgery of any eminence who has not touched in his turn on this widely spread malady; and numerous as the writers have been, nearly as varied has been their plan of treatment. External incision, internal incision, urethrotomy, dilators, caustics, bougies, and catheters, varying in composition and shape, all have been called

into play; each one plan of treatment vaunted as possessing some peculiar advantage over all others—each one in its turn, on its trial, being found deficient in many if not all of its boasted attributes. To write then, with the hope of putting forward anything novel in practice, may well seem a hopeless task; yet still it may be permitted to me the humble, though not less useful, office of contributing my quota of experience on a plan of treatment, 'tis true not of yesterday's date, but still *sub judice*. The plan of treatment to which I would wish to direct my readers' attention is that lately so ably advocated by Mr. Holt, in his work *on the Immediate Treatment of Stricture of the Urethra, by the employment of the Stricture Dilator*, and of which he had previously given us, at varied intervals, some notices in the periodical literature of the day.

Struck, in common with every one of his professional brethren who have had much practical experience in the treatment of strictures of the urethra, with the tedious dilatoriness that attends upon their ordinary routine treatment, by the process of dilatation by the introduction of successively enlarging instruments, Mr. Holt set his mind to work to invent an instrument which would permit of their more rapid dilatation, and, as the result, had constructed for his use, an instrument, difficult enough to describe, or to understand either from description or plate, but the construction and design of which could be understood from one moment's inspection. Were I to describe it, I would say that it somewhat resembles a conical metallic bougie, split down through its entire length, saving a space of about half an inch at its point, with a wire stilette, fastened at this part, running up through its centre to the handle, where there is a small frame work traversed with a screw, by the action of which the blades can be made to overlap and conceal the stilette, so that in this position it seems but a conically-shaped metallic bougie. On unscrewing the screw the blades can be separated, and the stilette comes into view, on which can be passed down a tube, of course with the effect of divaricating the blades, and by so much enlarging the original size of the instrument through its entire length, up to the point where the wire stilette terminates; there are variously sized tubes, for the purpose of adapting the size of the instrument to that of the natural calibre of the urethra. Such would be my method of describing the instrument, but, perhaps, after all it would have been wiser for me, on such a topic, to allow Mr. Holt to speak for himself. His description is as follows:—

"The instrument by which this simple process is accomplished, consists, as is shown in the drawing, of two grooved blades fixed in a divided handle and containing between them a wire welded to their points, and on this wire a tube (which, when introduced between the blades corresponds to the natural calibre of the urethra) is quickly passed, and thus ruptures or splits the obstruction."

This instrument, the idea of which Mr. Holt acknowledges himself to have derived from M. Perréve, resembles one of the two instruments first suggested by this latter gentleman for forcible dilatation of stricture of the urethra. One of his instruments was that which he termed the straight dilator, an instrument composed of two semi-cylindrical tubes united at the vesical extremity by a joint, and terminating at the other extremity, each in a short plate at right angles to the two blades, and traversed by a screw capable of approximating those two handles, as we may term them, to each other. When the two blades were in close proximity the instrument appeared like a straight metallic bougie, and was thus introduced through the stricture, and when it had traversed it the screw was made to work, so as to approximate the two plates, by which motion the blades were separated, on the principle of the instrument known to engineers as the parallel-rule, and, of course, the stricture rent. His other instrument closely resembled Mr. Holt's present one, with, however, this most important difference, that it contained no central stilette, the safe conduct of the dilators being entrusted to grooves with which the two blades are channelled throughout their entire extent; the obvious disadvantage of such an arrangement being that at any moment the dilator might get out of these grooves and inflict serious injury on the walls of the urethra—a source of danger from which Mr. Holt's modification effectually guards us.

Having, I trust, given my readers as clear an insight into the character of Mr. Holt's instrument as mere verbal description, without visual inspection, admits of, I shall proceed to examine how it is to be employed. For its being put at all into application it is evident, in the first instance, that the stricture must be permeable—and, indeed, permeable to the extent at least of allowing the passage of a No. 2 catheter or bougie. The size of the orifice of the meatus is next to be gauged, for a reason that will presently be understood, and then the instrument is to be introduced, care being taken to ascertain that it has reached the

bladder; a dilator corresponding, together with the instrument, in size to the capacity of the meatus is then steadily, but rapidly, to be passed down through the instrument, traversing the stricture, and, as a matter of course, splitting it open; the dilator is then to be withdrawn, and subsequently the instrument, and then a catheter of the full size that can enter the meatus is to be passed on into the bladder, the water drawn off, and the catheter then to be removed, and the patient to get, every third hour, a draught containing two grains of quinine and fifteen minims of laudanum. The next day but one the same sized instrument is to be introduced; but occasionally it so occurs that we may find a difficulty in passing one of that size, and may require to have recourse to one a size smaller; in a few days, however, we can once more readily introduce the larger one, and the patient, to all intents and purposes, so far as operative interference can go, is cured of his stricture. The object with which we gauge the size of the meatus urinarius must now be obvious to every one. Did we not do so, as urethras differ in length so do they in diameter, by using a dilator of greater size than the normal diameter of the urethra, we would not only split the stricture, but also the urethra throughout its entire length, and so seriously complicate our case.

Having thus described Mr. Holt's plan of treatment, it remains now for me to enter into an examination of its advantages and disadvantages, and of the latter I will treat first. Hypothetically it might be fancied that so rude a proceeding as forcibly tearing through a stricture should be attended with a host of dangers—urinary fevers, infiltrations, sloughings, *et hoc genus omne;* and, indeed, Mr. Holt candidly confesses that it was not without many misgivings that he made up his mind to the adoption of the decided measures that now he advocates. And yet, so far as our present experience goes, what has been the result? That in the numerous cases in which this plan of treatment has been adopted by Mr. Holt, no such untoward consequences have resulted. In Mr. Heath's hands, also, the use of the dilator has been crowned with signal success; and in the cases in which it has been employed either by myself or my friends in this city, I have not witnessed anything but the most encouraging results, as shall be evidenced by a record of some of the cases in which, either I myself have used this plan of treatment, or have seen it employed by others.

The first case in which the plan of forcible dilatation, so far as I am aware, was employed in this city, was that of M. E., aged 60.

This man had been repeatedly under treatment for stricture of the urethra, and had been subjected to a false passage. He came into the Meath Hospital in the latter end of April, under Mr. Collis' care; after some days we were able to introduce Mr. Holt's instrument; the stricture was burst on the 2nd May; the patient went out on the 10th of same month, and up to the present moment this individual is able to pass water in a full stream, and to admit of the introduction of a No. 10 catheter; and this without one single untoward symptom from the period of the operation to that of his discharge.

The case of A. B., aged 50, admitted into the Meath Hospital, September 10th, of the present year, was a most interesting one. He had been long subject to stricture, for the relief of which he had been treated by several surgeons on the plan of gradual dilatation; the largest sized instrument, however, that any of them ever succeeded in getting in was No. 4; and on the last occasion on which an effort had been made to introduce an instrument, considerable difficulty was experienced, and a false passage was made, attended, as he states, with the loss of a considerable quantity of blood. After a great deal of trouble I was enabled to get the dilator past the false passage into the bladder, split the stricture, introduce a No. 8 catheter, and empty the bladder; the hemorrhage was of the most trifling character; scarcely a drop of blood having been lost; and as to the pain, he exhibited so little concern, that I thought he had not felt it; and it was only in reply to my question on the subject that he expressed himself as having felt what had been done to him. This operation was performed on the 12th September; that night he had rigors, but of a very slight nature. Next day, and ever since, he was as if he had undergone no operation; and I now experience no difficulty in passing a No. 9 catheter; and, indeed, so far as his stricture is concerned, he might have been discharged, cured, the day but one after Mr. Holt's instrument had been used. He still, however, remains in hospital for the treatment of quite another disease, having no connexion whatsoever with the stricture.

The following case is one of great importance, both as to the gravity of the lesions, and in consequence of the manœuvre employed by which the dilator was introduced into the bladder.

R. T., aged 57, admitted into Meath Hospital in September, suffering from the effects of stricture of the urethra in three different situations, the most anterior being the tensest stricture

it has ever been my lot to feel. This patient was under my friend Mr. Philip Crampton Smyly's care, to whose courtesy I am indebted for liberty to make mention of it on the present occasion; this man had been on three different occasions operated on by different surgeons for the relief of his stricture, by external incision; he now is in a most deplorable state, Mr. Smyly with difficulty passing the smallest sized instrument. On the 17th September Mr. Smyly proceeded to put into operation the "immediate plan," and, after prolonged manipulation, failed in getting the instrument more than through the most anterior of the three strictures, when its further progress was arrested, not by the distant strictures, but by the tension of the anterior stricture, which could be distinctly felt tightly pressing the instrument, and completely impeding its further onward progress. Nor was I more fortunate in my endeavours to introduce it further, and the operation should have been abandoned, had we not, on consultation, agreed to burst this stricture, and then to proceed with the further steps of the operation, which Mr. Smyly accordingly carried into effect—he introduced the stilette, burst completely the anterior stricture, withdrew the stilette, closed again the blades of the dilator, continued its course successfully on into the bladder, again introduced the stilette, burst the other strictures, and, on the withdrawal of the dilator, introduced a No. 8 catheter into the bladder. In this case there was but little hemorrhage, and but very trifling constitutional disturbance. This case made a profound impression on me at the time, as a good example of forcible dilatation *versus* external incision; and the manœuvre by which the resistance of the anterior stricture was overcome and the bladder at last reached, is one that merits attention, consideration, and recollection in similar cases, at the hands of the operating surgeon.

The case of J. H., aged 51, admitted into Meath Hospital 21st September, presented features of peculiar interest. This man presented himself at the Hospital with the view of having an instrument passed; he had been twenty years suffering from stricture of the urethra, had been for the last fifteen years under treatment, and, as all such patients in process of time more or less so become, was perfect master of the features of his own case. He indicated No. 1 as the size that should be employed, as none other had ever been passed for him, and that it would require great dexterity to get even that into his bladder, that he had been for years accustomed to have this size occasionally introduced, and

that subsequently to its introduction, for some time, he felt comparatively comfortable. I proposed to employ in his case the "immediate plan," to which, however, he would not consent; he had been told by one of the first surgeons in Dublin, that a larger size than No. 1 could never be introduced, and he was not inclined to go "past" his opinion. In despair I gave up reasoning with him, brought him into the ward, in which happened to be lying the two patients whose cases I have last recorded, and on whom the operation had been so recently performed, and after some manipulation, succeeded in introducing No. 1 gum elastic catheter, which I directed him to keep for some time in his passage, and left him, having given directions to one of my apprentices to remove it previous to his departure. Next morning this gentleman greatly astonished me by informing me that this patient's scruples had been removed, and that he had returned to the hospital to place himself under my care, with the view of having his stricture treated by the "immediate plan;" and on inquiry it turned out that he had fallen into conversation with the other two patients, and their description of the relief that they had experienced by the operation was so satisfactory that it carried conviction with it, and he at once resolved to have recourse to it in his own case. In my opinion no amount of testimony could speak more trumpet-tongued in favour of Mr. Holt's method, than that afforded by this accidental occurrence. Both patients had experienced different plans of treatment; both had been subjected to the operation of forcible dilatation, and it was their representations that succeeded in convincing him, after all my arguments and persuasions had been urged in vain. This man's stricture was burst on the 24th September, and a No. 8 silver catheter introduced; there was scarcely any hemorrhage, but trifling pain, and no constitutional irritation, so much so that next morning he was up walking about the ward, and seemed rather amused at being asked about rigors, &c. On the 26th I failed in getting in No. 8, but passed No. 7; on the 29th, however, No. 8 passed easily enough, and he was fit to be discharged from Hospital.

This next case, operated on by Mr. P. C. Smyly this day that I write, is of too important a character to be omitted. J. N., aged 50, admitted into Meath Hospital, September 10th, suffering under stricture of twenty years' standing, consequent on a gonorrhea which was cured without the use either of injections or instruments. About twelve months ago an abscess formed immediately behind the

scrotum, which was opened, and ever since more urine passed through the fistulous opening than through the urethra. The scrotum and perineum were dense and swollen. On the 10th September Mr. Smyly succeeded in passing a No. ½ sized gum-elastic catheter, but for several days was unsuccessful in his efforts to introduce a higher number; at last he succeeded in getting a No. 2, and then, after a few days more, a No. 3 catheter into the bladder. On this, 29th September, the dilator was introduced, the stricture split, and a No. 10 gum-elastic catheter introduced with ease into the bladder, the urine drawn off, and the patient, some hours after the operation, expressed himself as being very comfortable, not presenting a single bad symptom. In this case also, the pain of the operation was unimportant, and the hemorrhage of the most trifling character.[a]

To continue the further illustration of the subject by recording similar cases would only be attended with an unnecessary lengthening of this paper. As I go on I shall quote one or two other cases, with the view of supporting other points in the treatment of stricture on this plan. I shall now proceed with the consideration of the untoward consequences that might be presumed to attend on this plan of treatment, did not our experience teach us otherwise. These, perhaps, may be reduced under the following heads :— infiltration of urine; hemorrhage; constitutional irritation and pain. Of this latter we shall speak first.

In the present age of chloroform, pain can scarcely be admitted as an argument against any operation. Anesthesia affording us a complete immunity from any of the bad consequences that we might otherwise expect from the *pain* alone of a protracted operation. I am perfectly prepared to admit that serious consequences have but too frequently ensued from long continued pain, or even from its endurance for a short period if it be of an intense character. Still, so far as my experience goes, the pain attending the forcible dilatation of a stricture is so much less than might, *a priori*, be expected, that I confess myself to be averse to the exhibition of chloroform in such cases. I cannot shut my eyes to the fact that (although in Ireland singularly fortunate in our immunity from

[a] Oct. 3rd.—Whilst revising proofs this morning I had an opportunity of seeing Mr. Smyly introducing a No. 11 gum-elastic catheter into this man's bladder. The fistula is entirely healed up; all the urine passes *per urethram*, and the induration is rapidly disappearing—so much so as now to require to be sought for to establish its identity with the case described in the text.

such disastrous cases) death has resulted when chloroform has been, even with the greatest skill and caution, administered, and where the fatal result can only be ascribed to its influence. In the majority of these cases the chloroform has been administered to permit of some trifling operation; and, with the knowledge of such facts, I cannot blind myself to the conclusion that (no matter how infinitesimally) it increases the ratio of deaths after operations, and, accordingly, I set my face against its employment, unless in cases when the importance of the operation demands its employment. This, however, in my opinion, is not an operation that, as a general rule, requires its administration; and I should say, that unless in a few exceptional cases, the use of anesthetics is uncalled for. When the patient is more that ordinarily timid; where a great amount of spasm obstructs or altogether prevents the introduction of the dilator, chloroform is called for. But, as I have already stated, the amount of pain attending the forcible dilatation of a stricture is of so trifling a character, and of so transient a nature, that so far from being an argument against this plan of operation, it does not even, in my opinion, justify our subjecting our patient to the extra (infinitesimal though it may be) chance of death resulting, as a consequence, on the use of the chloroform itself.

As to the chance of infiltration of urine, this (I need scarcely remind my readers a most serious complication) has not been found to result in any of the cases with the particulars of which we are as yet acquainted, nor, indeed, do I think it ever likely to be a common, or even occasional, sequence of the operation, and for this reason: the distending force is expended on the seat of the stricture, as, if the directions given be but followed, it is self-evident that the healthy portion of the urethra can not be put on the stretch; but at the seat of the stricture we find a mass of more or less thickened indurated structure encroaching, it is true, on the urethral surface so as to a varying degree interfere with its integrity, but by no means *limited* to that surface, but on the contrary extending itself into the surrounding tissues and converting them also into similarly indurated structure. Now, when the distending force is applied, 'tis true that the urethral portion of this structure, together with its covering mucous membrane, is split, but still a layer more or less dense (depending on the calibre of the distending force, and the extent to which this morbid growth has invaded the investing cellular tissue of the urethra) remains intact, and in virtue of its very composition limits any possible extravasation of urine.

So that what *â priori* might plausibly be urged as one of the disadvantages of this mode of operation, experience teaches us to be one of its greatest advantages; and I believe myself to be but stating a fact when I assert that, in no case up to the present has this most formidable complication ensued in any of the patients operated on in the manner discribed by Mr. Holt. Can we boast of such a result in the relief of stricture by perineal section? I have at this moment in my mind's eye a young gentleman, heir to a splendid fortune, in whose case death was the result consequent on urinary infiltration involving the destruction of the entire scrotum, leaving the testicles perfectly exposed, resulting from perineal section performed by one of the most skilful and experienced operators of which this city can boast, and that such is no exceptional case, the experience of every surgeon will demonstrate to be a melancholy fact; and why this should be so in one operation and not in the other, the pathological views here enunciated may to a great extent explain. 'Tis true that in one instance a fatal result, due to urinary infiltration, was ascribed to the operation of forcible dilatation ; but, in that case, the instrument employed was *not* Mr. Holt's but M. Perréve's, and in this instance I think it more than probable, considering the formation of this gentleman's instrument, that the dilator escaped from the channelled grooves, which it should have traversed, pierced this adventitious structure that constituted the stricture, forming a false passage of a formidable character—in fact the laceration of the urethra was of so extensive a nature as entirely to preclude the idea that it was due alone to *dilatation*. In my opinion it could only have ensued on some mischance of the nature here indicated, or have resulted from gross carelessness and ignorance on the part of the surgeon in not having more accurately adjusted the size of the dilator to that of the urethra; for, when proper attention is paid to this all-important point, the rent can only involve in extent the constricted, and by no means implicate the healthy, portion of the urethra.

In such a method of operating the danger of hemorrhage is not to be overlooked; and, indeed, when we remember the profuse bleeding that ensues on the unfortunate occurrence of a false passage, we might, without due consideration, expect it here also. Yet experience teaches us that, as the result of Mr. Holt's operation, the hemorrhage is of the most trifling character, in many cases being *nil*. Why this marked contrast between forcible dilatation of the urethra and a false passage should exist can be well under-

stood by a just appreciation of the pathological condition of affairs. The false passage in almost every case is, in the first instance, made in the healthy portion of the urethra anterior to the stricture—a highly organized vascular vital structure. In the case of forcible dilatation, the rent occurs in a structure of low organization, imperfectly supplied with vascularity, and what from a consideration of their relative composition might have been theoretically inferred, actually occurs in practice—hemorrhage in false passages—its absence in dilatation being the almost unvarying rule.

The chief peril, however, attendant on this plan of treatment would seem to be the danger of great constitutional irritation, evidenced by rigors—heat, sweatings, and general fever, consequent on this apparently rude method of treating stricture: that such may occur, I am free to confess; but that they are general sequelæ, I must strenuously deny. In all my cases, it is true, I have anticipated their supervention by the opium and quinine plan of treatment already described. Occasionally I have seen threatening symptoms of this character present themselves, but in no one case were they of any great moment, and they quickly yielded to a perseverance in the use of the medicines already indicated. In one case that occurred in my private practice, and to which I shall have presently more particularly to allude, the rigors were for a few hours of greater intensity, and the perspirations more profuse, in despite of the prophylactic treatment, than I could have wished; still, in no instance am I aware of their proving persistent in character, or unamenable to treatment.

But may I be permitted to ask my brother surgeons, do they never meet with cases where the most gentle efforts to introduce a catheter are attended with most formidable "stricture fever"? It is precisely for such cases as these that, in my opinion, the treatment by dilatation is pre-eminently suited. By the usual routine treatment of gradually introducing successively enlarging instruments, the system is exposed to repeated attacks of stricture fever. The constitution is but too frequently undermined, and our patients succumb, miserable victims of a disease that, if once and for all it had been boldly grappled with, might have been long since brought to a fortunate termination. By forcible dilatation they may be exposed to the risk of one attack of rigors, &c., but from the very nature of the operation they are ever after exempt from them; whilst, by the process of gradual dilatation, they are exposed to a series of shocks, with

a result but too frequently fatal. It requires but little argument to prove to which side the balance of advantages inclines.

Having thus considered all the objections that may be fairly alleged against this plan of treating stricture, I may now be permitted to consider its advantages, foremost amongst which must be ranked the rapidity with which the cure is effected. Everyone who has ever treated a stricture on the principle of gradual dilatation must recognize the tediousness, beset with disappointments, inseparable from this plan of treatment; and any surgeon of experience can readily recall to memory cases where he has conducted his case up to a certain stage, beyond which no art at his command could succeed in introducing a larger sized instrument. In my own experience my further progress has been more frequently arrested on the introduction of a number four than of any other size. A case presents itself to my notice, in which for some days I found it impossible to introduce any sized instrument, at last I succeeded in getting in a number $\frac{1}{2}$, and, *per tædia et labores*, ultimately arrived at the successful introduction of a number four, beyond which no ingenuity of mine could succeed in introducing a larger size. At this moment some half-dozen of such cases recall themselves to my memory; but the following one, as bearing on the advantages of the "immediate plan" as contrasted with that of gradual dilatation, is worthy of being recorded here:—For years past I have had under my care a gentleman who at an unusually early age contracted a most inveterate stricture of the urethra, about four inches from the orifice. At varying periods he has come to me for relief, and I have had him under treatment for periods of time varying from six weeks to three months, and invariably have been successful enough to dilate it to the extent of introducing a number four, beyond which my ingenuity or skill failed in getting, so much so that latterly on arriving at that number we had come to a tacit understanding that his case had arrived at its *ne plus ultra*. Within the past few weeks he returned under my care: I put fairly before him the advantages and supposed disadvantages attendant on the "immediate plan," and but little persuasion on my part was necessary to induce him to submit himself to the operation, which I performed for him on the 9th of this month, and on the 20th he returned to the country, able to pass for himself a number 11 silver catheter with ease. Here it may be asked, what advantage, exclusive of the enlarged size of the stream of urine that ensues, does the passage of a number 11 present over that of

a number four; why it should be that a patient can with greater facility pass for himself one and not the other? The answer is so self-evident to the surgeon who has been accustomed to the use of instruments that I can scarcely think it deserves consideration at my hands: for its solution, I must only refer him who cannot now solve the problem, to his future experience and a perusal of any elementary treatise that deals with the subject.

In such cases as these, want of success may be attributed to want of dexterity on my part: such charge, however, cannot be alleged against the attending surgeons in the following case, for the outlines of which I am indebted to Mr. Smyly himself:—

Some years past, a gentleman put himself under Mr. Smyly's treatment for bad stricture, and this able surgeon had him under his care until he succeeded in introducing a number five catheter, beyond which number, in spite of all his efforts, he failed in getting. This gentleman returned to London, of which city he was an inhabitant, and placed himself under the late Mr. Liston's care, who also was unsuccessful in his efforts to introduce a larger size than number five; at last he had recourse to Civiale's urethrotome, but with no better success, for a larger sized instrument than number five could he not get past the stricture. In such a case as this Mr. Holt's operation, in my opinion, would seem invaluable.

Again, we come across cases of stricture where on each passing of the instrument a fit of stricture fever supervenes, protracting, to a most tedious extent, the treatment, aggravating the patient's sufferings to a great degree, and seriously imperilling his life. In such a case as this, is it not wiser, once and for all, to put an end to the patient's sufferings, and by one operative interference place him instantaneously in the position which otherwise it must take months of suffering on his part, and of anxious care on that of the surgeon to ensure?

It is quite true that, to enable us at all to attempt this plan of treatment, we must be able to introduce an instrument of No. 2 size, as, if Mr. Holt's instrument be not introducible, it is evident it can not be employed; and so far as my experience goes, a passage of less diameter than that here indicated will not admit of its introduction; yet, on reflection, I cannot admit this as a drawback on its utility as an instrument for treating *stricture*. In many cases of *retention of urine* I confess it may be found of but little or no service; but it is not, so far as I can judge, proposed by Mr. Holt as an universal panacea indiscriminately applicable to

every case. In many cases of retention of urine, after proper manipulation and treatment, it will occupy its proper position; but independent of these I am prepared to admit, that cases will occur where we must have recourse to other operative interference; still I cannot admit even such cases to be valid, insurmountable objections to Mr. Holt's proposed plan of treating *stricture*. The entire gist of the matter lies in these two words—*retention of urine, and stricture*. A wide difference exists between these two phases. Occasionally, but rarely, we are not consulted by patients until their stricture amounts to absolute retention (I am not here speaking of spasmodic retentions of urine); but, in the vast majority of instances, our patients come to us at a period long antecedent to this unfortunate complication, and then it is that the dilator can be made so valuable an adjuvant in the hands of the judicious surgeon, sparing the patient's person the infliction of much long-continued suffering, and saving his purse the extraction of many a guinea.

In advocating this plan of treatment then, the question of the existence of such a disease as an impermeable stricture must occupy as prominent a position as some years back it did in the case of the operation for the relief of stricture, recommended by that distinguished surgeon Mr. Syme. Our experience is decidedly in accordance with that of the illustrious Edinburgh professor. Cases will occasionally present themselves, when we will experience great, very great difficulty, in introducing an instrument, but *where urine can get out, some sized instrument can be gotten in*, if not on the first or second trial, *certainly by perseverance*, especially if that perseverance be aided by the use of warm bath, *rest in bed*, opium, and in extreme cases, essaying the introduction of the instrument, under the influence of chloroform. To surgeons of experience it would seem an impertinence to dwell on the value of these most important adjuvants; to the tyro I would recommend each one and all of them, as of the greatest importance. To dwell on the value of rest in bed, may appear too elementary for these pages, but the value of this apparently unimportant direction has been too often and too closely demonstrated in my own practice, to permit me to pass it over *sub silentio*. The enforcement of a strict regimen will also materially assist our views, and should on no account be deemed unworthy of the surgeon's attention. Occasionally we will derive valuable assistance from the judicious employment of antimonials, but in the class of stricture which we

are now considering, opium will more frequently fulfil the desired indications than those last mentioned remedies; in the robust patient, however, I have found a combination of the two of the most marked service. To illustrate these remarks on the permeability of a stricture that had been considered impermeable, I may mention that, not many years since, I had occasion to employ one of our public vehicles, the driver of which had to pull up at every convenient spot, to make violent but ineffectual efforts to empty his bladder. Struck with the apparent intensity of his sufferings, I made some inquiry into their nature, and was informed that he had that very morning left one of our hospitals, in which he had been a patient for a week, and where every effort had been made to introduce even the smallest sized instrument, but unsuccessfully. I induced him to put himself under my care, and on the third effort was fortunate enough to introduce No. $\frac{1}{2}$; however, his was one of those cases to which I have already alluded as being those in which I could not get beyond No. 4, and at that number I was most reluctantly constrained to acknowledge myself baffled. However, the relief afforded perfectly satisfied him, and to this day he enjoys a fair share of comfort; the next time, however, that he presents himself for treatment I shall not hesitate to subject him to the "immediate treatment."

There is one other subject to which I would wish to direct attention, a topic, in my opinion, not sufficiently enforced in systematic works on the subject, and an error into which the young enthusiastic surgeon is but too apt to slide. I allude to the fundamental grand mistake of *over-catheterization*. Perhaps in no other department of surgery is the *nimia diligentia* more to be deprecated—to no other is the motto *festina lente* more appropriate.

A young surgeon gets under his charge a bad case of stricture, after more or less difficulty he at last succeeds in introducing an instrument, and, flushed with his success, he endeavours to push on the cure with a rapid increase in the size of his instruments, not a day is allowed to elapse, until, to his mortification and chagrin, he finds out that nature will not allow herself to be so hurried, and that his case would have progressed more satisfactorily had he been moderate in his demands on her forbearance. As with the cure of stricture by gradual dilatation, so is it with that by the "immediate plan:" remain content with the first introduction of the large-sized instrument for a couple of days, then cautiously endeavour to introduce it again, and if you experience any great difficulty in

introducing it, at once have recourse to the next smaller size, in two or three days time you will again try, and this time succeed in introducing the full size, and so go on, each time increasing the interval between the introduction of the instruments, until at last the patient is himself able to take his case into his own hands, and by the occasioual introduction, say every two or three months, of a full-sized instrument, guards himself against relapse.

This necessity that exists for the occasional introduction of an instrument, will, I doubt not, be urged as a fatal drawback on the value of this operation. Such, however, I am not prepared to admit it, until I am taught the mode of proceedure that requires not such treatment, or, at all events, in which its occasional employment is not at least a matter of prudent precaution. Mr. Syme's operation offers the nearest approach to this perfection; but even in it, in my opinion, the occasional introduction of the instrument, at longer or shorter intervals, is not to be neglected; and when we consider the great immunity this precaution affords against relapse, and at what a trifling expense, I should consider the surgeon criminal in the extreme if he fails in impressing this portion of the treatment on his patient's attention; and when we contrast the two operations, so far as *simplicity*, *facility*, *rapidity*, *and immunity from all subsequent complications are concerned*, I think but few will hesitate as to which the preference should be given.

Art. XV.—*On Elongation of the Uvula, and the Secondary Consequences Produced by the Enlargement of this Organ.* By Jolliffe Tufnell, F.R.C.S.I., M.R.I.A., Surgeon to the City of Dublin Hospital, and Examiner in Surgery Royal College of Surgeons in Ireland.

The merely passing remark commonly made upon elongation of the uvula by systematic writers, and the cursory notice generally bestowed upon the affections of this organ, are such as might lead any practitioner to suppose that this elongation was quite a trivial matter, unattended by any secondary complication—and, in fact, unproductive of any ill effect beyond "slight occasional inconvenience and some tickling cough." My own experience, however, points to a totally contrary result; and so great, and such continual annoy-

ances have I seen to arise as the consequence of neglecting this condition, both in its acute and chronic state, as to warrant a more full consideration being given to it than it generally receives. I have indeed so frequently been witness of this state of things that the offering of a few observations upon the subject may not perhaps be devoid of interest to some of the readers of the Journal. This affection, I may premise, is not uncommon. It occurs at all periods of life; it attacks the robust in its acute form, and the weakly in its chronic; and many persons, otherwise strong and in perfect health, suffer much inconvenience from it. Enlargement of the uvula, in its acute form, is mostly found to occur as the consequence of cold, from exposure to wet when associated with cold damp air. It becomes greatly distended; and, when examined, will often be found to be so elongated as to double upon itself, with its free extremity infiltrated into a bulbous form, resting upon the tongue. Its presence in this condition produces considerable distress, with a frequent and suffocating cough. It is not, however, in this instance a disease *per se*, but occurs as a portion of, and in connexion with, generally inflamed parts. Will, then, treatment directed alone to it influence and improve the state of the surrounding tissues? It will. And yet, in practice, such is not ordinarily allowed to be the case; or if it be so allowed, is not acted upon; and the individual thus affected is often permitted to remain suffering for days, from a source of irritation and annoyance which is capable of being almost at once removed by the discharging of the serum and blood which, combined, produce the distension of the areolar tissue surrounding the organ, and produce the mischief.

How is this, then, so readily effected? By simply scarifying the front of the uvula by snipping it across with a pair of scissors, or vertically scoring the surface with the point of a tenotomy knife; both acting in the same way by giving vent to the fluids that are effused. This treatment (so simple) is, however, not generally adopted. Gargles and the inhalation of vapour we find to be the means ordinarily resorted to with the view of removing the consequent distress—a distress which is almost entirely dependent upon the obstruction which the elongation produces, and which is reduced as soon as the œdema is got rid of.

Acute inflammation of the uvula is, however, its exceptional state; and the condition in which it is generally presented to the surgeon is that of chronic enlargement or relaxation. This state produces, not merely uneasiness of the fauces and occasional cough,

but severe paroxysms in some cases; and in others, sudden and alarming symptoms of impending suffocation; whilst in a third set there will be nausea extending to emesis, and the habit, if not checked, leads to periodically rejecting the food taken some short time before. In a fourth set of persons there will be nocturnal disturbance, imitating nightmare, interrupting sleep, and thereby breaking down the health of the individual in a very rapid manner. In all and each of these affections the uvula is in a chronically relaxed condition; the length of the organ is increased, the form assumed varying in different cases. In one individual it will be tapering, assuming a thin, pendulous, ribbon-like slip, broader above than below. In another it will have a neck-like extension, terminating in a transparent gelatinous body below, so confirmed, in some instances, as to warrant almost the term of polypus being given to it; and so pendulous that astringents are powerless in their action upon it. Now, taking the train of symptoms, in their progressive order, which follow upon the enlargement of the uvula, the most usual consequence is that of a feeling of uneasiness of the fauces, which prompts the act of hawking; this being rendered doubly necessary by the secretion of mucus which accompanies this condition, and which requires a considerable effort to be made for its ejection. This occurs more particularly in the morning, in order to get rid of the product of the night.

Tickling of the fauces is the next annoyance; and this produces a sensation of nausea such as oftentimes cannot be commanded; and the sudden and almost instantaneous contraction of the stomach which follows terminates in the ejection of its contents. This, too, is more common in the morning; and I have known an individual, for weeks, who could not be prevailed upon to have the uvula shortened, regularly vomit up his breakfast daily. Whilst this, then, is a consequence that follows upon rising, the state of the patient during the night may be infinitely worse. He may retire to bed tired and fatigued, but no sooner falls off asleep than an apparition throws itself suddenly upon him, and endeavours to strangle him by grasping the throat; escaping only after a severe contest and struggle, the individual awakens frightened and almost powerless from the imaginary trial of strength—again sinks off to sleep under the depression, but only to meet and undergo a repetition of the same hideous scene. Three, four, and five times a night may the same thing occur, so as almost entirely to rob the patient of sleep and rest, and to cause retirement to bed to be dreaded;

each attack terminating in a profuse cold sweat, leaving the sufferer feeble and exhausted.[a] In phthisis, too, elongation of the uvula is often a most severe complication, and its truncation imperatively demanded; for, from falling down into the orifice of the glottis, symptoms of suffocation may occur, and, in the struggling effort at forced expiration, in order to expel the foreign body from the air tube, a large pulmonary vessel may give way. There is no security, indeed, for a single moment; and the individual is perpetually liable to threatened suffocation from this cause, if the uvula, especially, have become elongated into what I have alluded to as its polypoid form.

The obvious plan of treating this affection in either of the cases I have alluded to is the removal of the offending organ by excision; not, however, in any haphazard manner, but with a proper regard to the portion to be removed, and due allowance for what should be retained. If sufficient be not taken away little or no relief will follow; if, on the other hand, too much be excised, considerable annoyance will be the result, as the effect of such truncation is to destroy the natural condition and form of the pharynx. It is an error to suppose the uvula to be superfluous, as some almost seem to regard it.[b] It is necessary for perfect deglutition; and its abstraction materially interferes with that process. It should be removed, therefore, by scissors adapted to the purpose, that effectually perform their office, seizing and fixing the uvula securely, without unduly dragging upon it. If the pendulous portion be not fixed steadily at the moment of removal the chances are that it will not be cut through. It is the seemingly trivial nature of the operation that leads to the neglect of ordinary care and precaution. I recently witnessed a case which bears so completely upon the point that I may mention it here:—I was seeing, in consultation, a gentleman who had come from the country, with symptoms of external aneurism, and who, after the conclusion of the more immediate question, expressed a desire for his throat to be examined, as it was giving him trouble. The surgeon in attendance did so, and at once informed him that

[a] *Vide* cases reported by Drs. Russell and West.

[b] One use of the uvula seems to be to direct the mucus of the nares into the œsophagus. It is not required by those animals whose heads are not erect on the spine, and therefore is restricted to man and the simiæ, and some of the ruminants—as camelopard, dromedary, or those whose heads are carried erect. It assists, also, in swallowing liquids, by directing them away from the epiglottis, by dividing the fluid into two streams, as noticed by Professor Corbett.

his uvula was too long, and must be snipped off, taking a pair of ordinary scissors from out of his pocket-case, and desiring the patient to open wide his mouth. This he did, and stood boldly upright; but no sooner did he feel the blades closing than he involuntarily sprang back; the surgeon made a plunge and dart at the uvula, but failed to cut it more than partly through; and the utmost entreaties were required to prevail upon the patient to sit down and allow the excision to be completed. For half an hour, or more, he persistently refused; and he was very nearly returning home to the country with his uvula only half divided. The annoyance caused to the practitioner was extreme; and, as we left the hotel, he declared that he would not have had it happen for a very great deal, and that "he would take —— good care it should not occur again."

Of the forms of scissors and guillotines fashioned for this purpose I prefer those invented by Dr. Carte, and first exhibited at a meeting of the Surgical Society of Ireland, in 1846, but invented by him in 1841. The date I particularly mention, as I believe the priority has been claimed elsewhere. This instrument, at the same time that it cuts the uvula, has a provision by which it secures the divided part, and thereby prevents the possibility of the separated portion falling down into the opening of the air passage. It consists essentially of a pair of scissors, with blunt points; but, in addition to the ordinary cutting blades, there are beneath these (attached by means of screws) a pair of blunt supplemental blades, whose flat surfaces come in contact with the substance of the uvula wherever it may be seized, and grasp it steadily whilst it is being severed by the cutting blades—holding it subsequently until released. The tongue can be depressed with the left hand of the surgeon when employing these scissors, but not so when using the common kind, as the freed portion of the uvula has to be taken hold of by a tenaculum, spring-forceps, or hook. With reference to the forms of astringents to be employed in cases where the individual objects to have the uvula excised all have to be resorted to in turn, but the simplest and one of the most efficacious is the common decoction of oak bark with alum. For the treatment of elongated uvula, however, if developed to an inconvenient length, there is no remedy so efficacious as truncation properly performed.

Art. XVI.—*On the Recent Epidemic of Puerperal Fever in Dublin.* By John Denham, M.D., Master of the Dublin Lying-in Hospital.

An earnest desire to uphold and promote the interests of the profession, and a determination to bring under the notice of my brethren whatever of interest or value might come before me in my present position, be the result favourable or the reverse, must plead my apology for taking up the subject of puerperal fever, which has been so often and so ably discussed by other writers.

This fatal malady, like an ill-omened bird, seems to await the incoming master to this institution on the very threshold of his appointment, and take delight in marring the happiness consequent on his appointment, by many a sad and heart-depressing scene, thus teaching him that his post, however honourable or lucrative, is one of deep responsibility and anxious care.

The epidemic I am now about to speak of has been peculiarly of the asthenic type; remarkable alike, in the majority of the cases, for its early invasion after delivery, the rapidity of its course, and its fatal termination. More than any other epidemic that I have seen, it has impressed me with the close relationship that exists between puerperal fever, erysipelas, and scarlatina. Depletion by bleeding, or purgatives, however successful in other hands, and in former epidemics, we found to be not only useless, but most decidedly injurious in the present outbreak. And in making this remark, I beg to be understood as not, in the slightest degree, casting any imputation on the practice of those eminent men—such as Collins, Armstrong, Gordon, and others, who in former epidemics treated the disease, and treated as successfully perhaps as we now do, by the lancet, calomel, or emetics. My opinion has long been that either through atmospheric influences, changes of constitution, induced, perhaps, by atmospheric influences, modes of living, or other unseen, and therefore unknown causes, a new and different disease has been called into being; not new, I regret to say, in the frequency of its visits, its symptoms, or its fatal results; but new as to the treatment necessary to insure any reasonable hope of success.

That the blood-poisons inducing puerperal fever, scarlatina, or erysipelas, are closely allied, if not identical, is by no means a new idea. Several of the older writers alluded to it, and it has been

strongly dwelt upon in some of the reports of former epidemics in this Hospital, as you will see by referring to the 27th No. of the *Dublin Medical Journal.* The late Dr. Douglas, of this city, in a paper written in 1821, thus alludes to it:—"The contagious puerperal fever of Dublin, is, I venture to pronounce, nothing more or less than a malignant fever of a typhoid character, accompanied with an erysipelatous inflammation of the peritoneal covering of the stomach, intestines, and other abdominal viscera."

M'Clintock and Hardy, in their valuable report of this Hospital, say—"The same state of the atmosphere that gives rise to erysipelas, would seem to favour very much the development of puerperal fevers generally, and the phlebitic form in particular."

My friend, Dr. Henry Kennedy, has also directed attention to this subject in a very valuable paper read before the Obstetric Society some years ago.

The epidemic of which I am now speaking, like almost all other epidemics, came upon us with slow but certain progress; and here I would beg to remark, that I use the word epidemic in its literal sense, as opposed to the term contagion or infection. Much confusion has arisen, I apprehend, by our not keeping such words apart, and giving to each their true meaning.

By an epidemic disease I understand one, which, independent of local causes, seizes on a great number of people at the same time, and in the same season. By a contagious or infectious disease I mean one that is in any way communicable from one person to another; the disease being conveyed to the person of the recipient by particles of matter proceeding from the person of the sick, either in a solid or gaseous form; imparted by the air, or carried upon articles of clothing.

I beg not to be understood as wishing it to be inferred from what I have said, that a disease is not contagious merely because it prevails epidemically; the two may and do meet in the same malady, and must not, therefore, be regarded as incompatible properties; and I am free to admit, that those two properties may often be found to combine in the very disease of which we are now speaking. What I complain of is, that those writers who advocate the infectious nature of puerperal fevers, in their anxiety to establish their position, have entirely overlooked the epidemic element, and have heaped unmerited reproach on medical men who have had the misfortune to live within the epidemic circle, and upon institutions that have been the recipients of patients who have imbibed the

epidemic poison perhaps for days before they entered within its walls.

In the month of November last there were 72 patients delivered in the hospital; 16 were attacked with puerperal fever, and one with scarlatina; she recovered. Of the 16 puerperal cases 9 died; in five of them the fever was of a low typhoid form, proving fatal on the fourth or fifth day after delivery. In three of them the symptoms presented were those of uterine phlebitis and pyemia—proving fatal—one on the seventh, one on the eighth, and one on the ninth day. The remaining fatal case was attacked with pain (abdominal) and rigors on the second day after delivery; on the night of the fifth day she had two marked fits of convulsions, with vomiting of black fluid; she never became conscious after the first fit, but lay in a state of stupor until the ninth day, when she gradually sank and died.

One of the six non-fatal cases was attacked with pain and swelling of the left knee, which extended to the whole leg, causing much pain and constitutional disturbance. Another had, superadded to the phlebitic symptoms, erysipelas of her left elbow, ending in abscess; she became maniacal on the seventeenth day, and was removed by her friends on the twenty-first, contrary to our wishes.

In December there were 103 deliveries—and of these 14 were attacked with puerperal fever, and three with scarlatina. Nine of the puerperal cases proved fatal—death taking place in all, with one exception, from the fourth to the sixth day. In the exceptional case, the urgent symptoms so far subsided as to enable the patient to be removed to the recovery ward. There she was attacked with phlegmatia dolens, inflammation of the knee joint, and sloughing over the sacrum and on both hips. She was released by death from her intense and prolonged sufferings on the thirty-sixth day after delivery, every texture in the body giving evidence of blood-poisoning to a fearful extent. The patients attacked with scarlatina all died. One of the five cases not fatal, suffered from a severe attack of bronchitis, for which she was attended by Dr. Croker, our consulting physician; another had an abscess over one scapula.

The new year, which to most people is a time of rejoicing, proved a season of deep sorrow and anxiety. From the 1st of January till the 11th, when the hospital was closed, we had 37 patients delivered. Of these, four were attacked with scarlatina, and 16 with puerperal. All the scarlatina patients died—two on the third day after the attack, and two on the fourth. Ten of the puerperal cases

proved fatal; one of them died in 24 hours; another, in which there was morbid adhesion of the placenta, died on the third day, with symptoms of uterine phlebitis; in another pleuritis was superadded to the phlebitic inflammation, and proved fatal on the seventh day. Two others were attacked with erysipelas, and died—one on the twelfth and the other on the sixteenth day.

Of the six cases that recovered, one was attacked with erysipelas of the right arm, which ended in an abscess.

The hospital was again opened early in the month of February, admitting, however, only a limited number of patients. Thirty deliveries took place; and of these six were attacked with puerperal fever; two of them died, and one was in hospital until lately—a case of considerable interest.

She appeared a healthy, active girl, and had a safe and easy labour for a first child. She became maniacal, however, on the second day, having had a rigor a few hours before; symptoms of metritis and peritonitis, with frequent rigors, followed; she complained much of pain in the head; and on the tenth day inflammation of the right eye set in suddenly, with loss of vision; an erysipelatous patch also appeared on the right elbow, which ended in a small abscess. Sloughing over the nates next appeared; but she ultimately recovered, with loss of vision in the right eye.

In this case the head was shaved, and nauseating doses of tartar emetic were given in the first instance; when the pain set in over the uterus she was leeched, as the pulse was quick and strong. She was then put on hypo-sulphite of soda in scruple doses; but this we were obliged to discontinue, as it induced vomiting and purging, although given with small doses of liquor opii; bark, and carbonate of ammonia were then given, with a liberal allowance of wine and chicken broth. I should have mentioned that the chest was much engaged in this case also. For many weeks she remained in a most pitiable condition, but has now left quite well.

From the brief and imperfect report now given it will be seen that out of 150 cases 50 were attacked with puerperal fever, and eight with scarlatina; 20 of the puerperal cases died, and seven of those attacked with scarlatina; of the latter, one lived till the fifteenth day; the case was one of great interest, but very unpromising from the commencement; eruption very abundant, but of a dark livid colour; pulse weak and rapid; sordes on the teeth; great prostration, with low muttering delirium; yet, contrary to our expectation, the fever subsided, the pulse fell, and desquamation

extensively set in, giving us a strong hope of recovery, when, unfortunately, an overloading of the stomach with food, incautiously given by the nurse, brought on an attack of vomiting, under which she rapidly sank and died.

Bark, with carb. ammonia, brandy in small quantities, and wine to the amount of 148 oz., formed the principal treatment in this case.

The class of patients that came in at this time were ill fed, ill clothed, and often depressed, not only in body but in mind; some of them unmarried, and some of intemperate habits; very much the class of persons that fell victims to the cholera when it prevailed in this country. The cholera in India is much more frequent and fatal among our common soldiers than their officers; and so with puerperal in this country, be it infectious or epidemic; it is not only more general, but much more fatal among the poor and the outcast than among those who are well to do in their comfortable homes. As I have already mentioned, the present outbreak was characterized by the early and urgent appearance of the symptoms, and the little influence exerted upon them by treatment. The data given will show how short the time allowed us to attempt a cure, and how unpromising the material we had to work upon. Depletion could not be borne; and, when tried, did not seem to allay the symptoms. Stimulants and light nutritious food were what we relied most on, and apparently with most success. To some we gave muriated tincture of iron; to others, the hypo-sulphites; and others again we treated with camphor and Dover's powder. But the result appeared to be much the same in all. Our success, or rather the absence of it, was quite as great in the one form of treatment, so far as specifics were concerned, as the other; and the conclusion has been forced upon us that, as in cholera, so in puerperal, we have yet to seek for a certain remedy.

One patient had a rigor 14 hours after delivery, and died on fourth day. Another in 16 hours after—she died on the fourth day also. A third shivered 17 hours after delivery, and died on fifth day. And a fourth in 20 hours after—she only survived 36 hours.

The amount of stimulants necessary was well exemplified in the case of Mary Clive, who took 164 oz. of wine during the attack—she recovered.

The subject of contagion in puerperal fever is one of the deepest importance, not only to the profession generally, but to the public at large; and one, too, I am sorry to say, on which there is a great

diversity of opinion. A preponderance of talent and experience will, doubtless, be found in favour of infection; but I must say that many of the facts and arguments put forth by those who uphold it appear to me very inaccurate, unphilosophical, and inconclusive. I am by no means prepared to deny that puerperal fever is infectious, but I believe it to be much less so than is generally supposed, and that the epidemic element, after all, is the principal agent in upholding and propagating the disease.

I shall briefly allude to the opinions of a few of those who have written on both sides of the question, and then draw some general conclusions elicited by the recent epidemic, and the reconsideration of the subject which has thereby been forced upon me.

Dr. Semelweiss, of Pesth, in his book on *The Etiology, Nature, and Prophylaxis of Puerperal Fever*, states that puerperal fever is, without any exception, a fever of absorption, arising from the absorption of decomposed animal matter, which, in far the greater number of cases, is communicated from without, and that these are cases that can be guarded against. In some rare cases the decomposed matter is generated within the limits of the parts affected, and these are cases of self-infection that cannot all be guarded against. One source of this matter which produces puerperal, is a dead body of whatever age or sex, no matter what the malady was of which the individual died, it is also indifferent whether it be or not the body of a woman who died in child-bed, it is only the degree of putrefaction which is here of consequence. A second source from which the decomposed matter comes is sick persons, no matter what their ages or sex, whose maladies are attended, in their progress, with the generation of decomposed animal organic matter; thus, in the first lying-in ward of an hospital in Vienna, puerperal fever was produced, in October, 1847, by the oozing out of matter from the medullary cancer of the uterus, and in November, '47, by the effluvium of a carious knee.

He mentions, as a third source, all the physiological formations which, having been withdrawn from the control of the vital forces, have entered into a certain degree of decomposition; thus in 1856–7, '57–8, the physiological blood, and the normal *fluxus lochialis* became, in the Pesth hospital, the etiological momentum of puerperal fever.

The place where this matter is absorbed is, he says, the surface of the uterus, from the mouth upwards, it being deprived of its

mucus membrane, and consequently highly capable of absorption. The conveyers of this poison are the finger of the examiner, bed clothes, atmospheric air, sponges, hands of nurses, bed pans, &c. The time when infection most often occurs is during the opening of the os, as then the necessity to probe it with the finger is most frequent. As a proof of this, at the time before washings with chlorine were practised in Vienna, all those women with whom the period of the opening was protracted beyond the usual time died, almost without exception, of puerperal fever.

He admits having seen at least 20 women attacked with puerperal during pregnancy; that is, I presume, before delivery. He further states, that a single woman died during pregnancy of puerperal fever, and was delivered by him, by means of the Cesarian section, in order to save the life of the child. It does not appear very distinctly whether he operated before or after death, nor does he inform us whether the child was saved or not.

Dr. Gordon, of Aberdeen, states, that the malady attacked only those women who were attended by a physician or nurse who had previously attended those affected with the disease.

Copland in his *Dictionary of Practical Medicine* says, the fact of the contagious nature of this disease, is completely set at rest by the above evidence, especially when it is *undisputed* that within the walls of lying-in hospitals a miasm is often generated as palpable to the senses, and even much more so, than the fumigations used to destroy it, and more deadly than the plague, if not arrested at its commencement. I may further add, he states, that lying-in hospitals, or even lying-in wards, ought not to be allowed to exist.

Again, he states, the practitioner is now too well informed, or at least, the sources of information, as to this matter, are too open for him to be longer ignorant, that this most deadly of our domestic pestilences, is conveyed from the infected to the healthy, chiefly, and most frequently, by the accoucheur, when it occurs without the walls of a lying-in hospital.

Among other proofs of infection, he mentions a case reported by Dr. Merriman, in the *Lancet* of May, 1840, where the Dr. states, that he attended the *post mortem* examination of a puerperal case, at 2 o'clock, P.M., but took care not to touch the body; at 9 o'clock the same evening he attended a woman in labour, she was so nearly delivered that he had scarcely anything to do. The next morning she had rigors, and died in forty-eight hours; her infant had erysipelas, and died in two days.

Again, in the more concentrated state of the effluvium, as generated in the crowded wards of a lying-in hospital, I have seen, he writes, females without any complaint, and dead within twenty-four hours afterwards. Again, he says, I believe that the chief sources of puerperal fevers, particularly of their most malignant forms, are lying-in hospitals, in which not only a very large proportion of those who are received become infected, but also from which the infection is carried abroad, not solely by the females who go out, but also by the clothes of the dead, and of those that recover, and by the persons and clothes of the medical attendants. Again, most of the instances in which puerperal fever has become so prevalent, as to be called epidemic, have occurred in lying-in wards, and the disease has been limited to them, unless on some occasions, when the infection has been carried abroad from them. The term epidemic is, therefore, not strictly applicable, the malady being truly endemic. It is not improbable, however, he admits, that certain atmospheric constitutions, &c., may so affect also the form and prevalence of puerperal fever, as to render it not only endemic in lying-in hospitals, but also epidemic, or approaching to this state, in various places in which it may break out.

Privies, next to accoucheurs, he looks upon as one of the principal sources from whence arises the spread of puerperal, and other female complaints; thus, at page 129 he says—"Privies emitting contaminating vapours, I have remarked in several instances to give rise to asthenic, or irritative and spreading inflammation of the vulva, vagina, and cervix uteri of married females, and even also of the rectum." At 167, he says—"It has been shown above that the poison may be conveyed to the uterus or the vagina by contact, by the hands of the accoucheur, or the poisonous miasms or vapours exhaled from foul privies, frequented just before delivery. A gust of foul air on those occasions may so infect the vagina and os uteri as to give rise to all the complications and phenomena of this malady."

Professor Simpson, of Edinburgh, holds strongly the infectious character of the disease, and, I regret to add, makes the doctor bear the sin and disgrace of spreading the disease to a large extent. He says—"We do not believe in this country that the disease is usually propagated directly from individual to individual, but indirectly through the medium of a third person, and that person generally the medical attendant or the nurse." "The disease," he adds, "is often, confined to the practice of some one single prac-

tioner or nurse in a town or city;" in proof of which he gives the case of the midwife, reported by Dr. Roberton, of Manchester, where the patients of one nurse alone, out of 12, were attacked, and of whom 16 died in different parts of the city. The disease, he states, may be propagated by the morbid effusions of one puerperal woman when inoculated into another.

2nd. By the secretions from the vagina of a puerperal woman conveyed by the fingers of nurses or midwives.

3rd. By the secretions from other diseases, such as erysipelas; and 4th, by some varieties of febrile exhalations inhaled into the blood of newly delivered women.

In proof of this last opinion, he alludes to the case of typhus fever mentioned by Dr. Collins, where the woman in the same ward appeared to be infected by her, and died of puerperal fever.

Prof. Simpson further says—Patients during labour may and have been locally inoculated with a *materies morbi* capable of exciting puerperal fever, and this poison is liable to be inoculated into the maternal passages by the fingers of the attendant. In cases in which puerperal fever is thus communicated and produced, two or three days after delivery usually elapse before the disease breaks out, or in other words, there is a latent period like what we see in small-pox and other communicable diseases. And to show with what facility the disease may thus be produced, he describes the internal state of the uterus and vagina after delivery. We have, he says, a wound or solution of continuity on the whole internal surface of the womb, made by the separation of the placenta and the exfoliation of the decidua, and this wound has, opening upon its free surface at the former site of the placenta, the mouths of numerous arteries and veins.

The vaginal mucus membrane is generally stretched and abraded in labour, the perineum is often slightly torn, and the whole affords a surface in a condition easily inoculable.

The diminished mortality in the Hospital at Vienna, said to have been produced by obliging the students to use disinfecting agents to their hands before entering the Hospital from the dissecting room, has been much dwelt upon, and perhaps with much justice and truth, especially if such students had been engaged in the *post mortem* examination of puerperal women; the purification of the clothes of such students would, however, in my mind, be quite as necessary as that of their hands; but we have yet to learn whether

the diminished mortality was so produced, or was merely the result of the cessation of epidemic influences.

And now let us turn to those who take the opposite view of the case.

Dr. Meigs, of Philadelphia, in his work on midwifery, states—"I do not find the least reason to suppose that I have ever conveyed the disease from place to place in any single instance. I have made many necroscopic researches, but never did I suspend my ministry as accoucheur on that account; still I certainly never was the medium of its transmission. I have, in numerous instances gone from the bed-side of women dying of child-bed fever, whether sporadic, or in the most malignant degree epidemic, without making my patients sick.

"In a series of labours, 468 in number, and beginning with No. 1, 18 and 19 were affected; so was 31. No. 195 and 259 were sick. No. 291 died; also 293. No. 332, 339, 435, 444, and 445 were attacked.

"Thus 13 cases in all sickened; 3 of these died, 10 recovered. Now if I was the medium of contagion, why did I poison them in the ratio and order above set forth; and why did I not communicate the disease in more than 13 cases out of 468?"

Dr. Meigs also mentions the case of a Dr. Rutter, who seemed to be tracked by the cause of this disease, and who, to escape from it, went into quarantine for 10 days, a distance of 35 miles. On his return, he had his head shaved, took a warm bath, procured a new wig, new clothes, new hat, new gloves, and new boots; he even left his watch and pencil at home. Well, he went to attend a lady who had a very favourable labour, yet was next day assailed by a horrible child-bed fever and died. "I was," says Dr. Meigs "a great deal with her in her illness, but she did not poison me nor my clothes; for although I went on with my practice, I poisoned nobody."

Dr. Churchell, in his truly practical work on midwifery, gives the case mentioned by Gooch, where a man in large practice lost so many patients that he left off for a month, during which time not a case occurred to his partner. He returned; again resumed, and the very first case he attended was attacked with the disease and died. My friend, Dr. M'Clintock, has declared to me that he was never conscious of having conveyed the disease from the Hospital to a private patient; nor could he bring to his recollection a case in Hospital where a patient in the bed next to a puerperal fever case seemed to be infected by her unfortunate neighbour. So

far as my experience has gone, I can safely testify to the same fact. I will next introduce one or two old and esteemed friends, as unwilling, or rather I should say incidental witnesses on this side of the question.

Dr. Collins, in his valuable report, states that in February, 1829, puerperal fever, which for several months previous had prevailed in the Hospital, now increased so much in intensity as to induce him to close the Hospital, when the entire house was fumigated, white-washed, and cleansed in the best possible manner.

From the time this was completed until the termination of his mastership in 1833, he states he did not lose one patient by this disease, a period of nearly 4 years.

In Johnston and Sinclair's very able and valuable report of Dr. Shekleton's mastership, they state, that while in 1848 there were 43 cases of puerperal, in '49 there were only 29 cases; in '50, 15; in '51, 10; in '52, 3; in '53, 8; and in '54, 11 cases. Total number, 129. Deaths, 75. Recoveries, 54.

Only 2 cases of scarlatina, and 1 of erysipelas occurred during the entire seven years. All 3 were fatal.

Will any one for a moment contend that the immunity from this disease, thus enjoyed by Dr. Collins for four years, resulted merely from whitewashing, fumigating, and cleansing? or will our friends, Drs. Johnston and Sinclair, contend that the absence of puerperal from the years '50 to '54, was the result of any particular mode of practice, or any increase of care and attention on the part of the Master and Assistants? Should we not rather ascribe it to the absence of epidemic influences, combined with the strict attention to cleanliness and ventilation that has at all times characterized the management of this institution.

We are all familiar with the fact, that there are great varieties in the general character and symptoms that occur in different epidemics of the same disorder; at one time or in one place imflammatory symptoms run high; on another occasion there is an early tendency to debility and sinking. These differences are not to be explained by any variation in the exciting cause, which is a definite poison; nor should they be ascribed, perhaps, to any appreciable quality or agency of the weather at the immediate time; they seem rather to depend upon changes that have been slowly wrought upon the human body, changes probably due to previous conditions of the atmosphere, which have exercised a long and gradual influence upon all the individuals of a community.

The poisons that may enter the system form two distinct classes, inorganic and animal; of the former some are taken into the blood and emerge again from the body unaltered; they may induce changes, and if these changes be salutary, the substances become medicaments; if the changes be injurious or destructive, they are poisons. Other of the inorganic poisons enter into permanent chemical union with the tissues, and, as Liebig says, deprive the organs of the property which appertains to their vital condition, viz.:—that of suffering and effecting transformations. If the organs of which the functions are thus destroyed are vital organs, these poisons are fatal.

But the animal poisons, those at least with which we are more concerned, act in a totally different way, they effect changes in the blood, whereby they are themselves abundantly multiplied or reproduced. This is the old humoral pathology. The ancients attributed various disorders to a fermentation of the animal fluids. The cause of fever, according to Hippocrates, was some morbid matter in the blood, this, by a process of concoction, was brought in a certain number of days into a state in which it was ready for expulsion from the body, it was then thrown off by hemorrhage, sweat, or alvine discharges, or deposited on the surface in the form of abscess or cutaneous eruption. This theory is much the same as that which Liebig is now teaching.

He ascribes the phenomena which succeed the introduction of certain poisons into the blood to a process resembling fermentation; this, he says, is but a type of what takes place in other fluids, under analagous circumstances. He maintains that a substance in the act of decomposition, added to a mixed fluid in which its constituents are contained, can reproduce itself in that fluid, in the same manner as new yeast is produced, when yeast is added to liquids containing gluten. Thus, for example, the virus of small-pox causes such a change within the blood, as gives rise to the reproduction of the poison from certain constituents of that fluid; and whilst this process is going on, the natural working of the animal economy is disturbed—the person is ill.

The character and phenomena of puerperal fever, and its inflammatory results agree with those of small-pox, measles, scarlatina, and other so-called disseminated inflammations of M. Chomel in this respect, that whilst originating, as he believes, in different specific infections of the liquids or blood, they all agree with each other in several respects, as that they cannot be excited artificially

by the common causes of inflammation, but are developed by specific causes; they are thus secondary inflammations, resulting from a primary morbid diathesis, or alteration of the animal fluids.

With respect to the opinions put forth by Dr. Semelweiss, of Pesth, namely, that puerperal fever is, without any exception, a fever of absorption from decomposed animal matter, and that the place where the matter is absorbed is the inner surface of the uterus, such poison being conveyed to it, in the great majority of cases, by the fingers of the medical attendant during the first stages of labour, I feel it would only be a waste of time to dwell upon them. He seems entirely to overlook the fact that the disease frequently appears in towns where there are neither lying-in hospitals or dissecting rooms, and in rural districts where medical practitioners are seldom called upon, in midwifery cases, until the patients are, perhaps, beyond recovery. He also forgets that small-pox, measles, and scarlatina, with other infectious diseases, are often propagated by the inhalation of a poisoned atmosphere, where no contact could possibly have taken place.

I may mention that I have lately visited the hospital in Vienna, and that the professor of midwifery, Dr. Braun, informed me that the theory put forward by Dr. Semelweiss had been entirely upset during the last outbreak of puerperal. The midwifery hospital in Vienna is divided into two departments—one being devoted to the instruction of medical students, the other being entirely managed by nursetenders. It so happened that during Dr. Semelweiss' residence in Vienna puerperal fever was much more prevalent and fatal in the department allotted to the students than in the others, and upon this circumstance he founded his theory and supposed discovery of prevention by washing the hands with chlorine. Unfortunately for this view of the case, during last winter the disease was more frequent and more fatal in the female department than in that to which the medical students had access.

It is much to be regretted that the writer in *Copland's Practical Medicine* should have met with such unfavourable specimens of midwifery hospitals as to lead him to hazard such rash statements as he has made. I have been in many such hospitals, but have never yet been able to discover a miasm generated there as palpable to the senses, and even more so than the fumigations used to destroy it, and more deadly than the plague.

Will any one agree with him, that the case given by Dr. Merriman is a proof of infection. He attended a *post mortem*

at two o'clock P.M.; took care not to touch the body; at nine o'clock the same evening he attended a lady in her confinement, who was so nearly delivered when he arrived that he had scarcely anything to do. The next morning she had a rigor, and died in 48 hours. I would merely ask, through what channel was the poison conveyed in this case, and what was the duration of the period of incubation? In another paragraph he asserts:—I have seen females in lying-in hospitals, without any complaint, and dead in 24 hours afterwards. Here, again, I would ask, how was the infection communicated, and what was the length of the period of incubation? His credulity with respect to the spread of chronic diseases in the vulva, vagina, cervix uteri, and even the rectum of married females, by contaminating vapours from privies has, I confess, shaken my faith in his judgment quite as much as his aphorism that vapours exhaled from foul privies, frequented just before delivery, may induce puerperal fever, with all its complications and phenomena.

Professor Simpson seems to agree, to a large extent, with Dr. Semelweiss in thinking that the disease is propagated principally by the local inoculation of a *materies morbi* in the maternal passages, and in support of this he describes the whole inner surface of the uterus as a wound or solution of continuity, and this wound, he states, has, opening upon its free surface at the former site of the placenta, the mouths of numerous arteries and veins. The condition just described I believe to be the exception and not the rule, and is only to be met with where the vessels have been, as it were, accidentally ruptured; this I know, that I have separated the placenta from the uterus, where a woman had died undelivered, without rupturing a single vessel, or spilling a drop of blood. This, however, is a matter rather beside the question, and not bearing much upon the discussion. Professor Simpson states what is more to the point, so far as the question of contagion is concerned in relation to our late epidemic, namely, that in cases where puerperal fever is communicated by the poison being brought into contact with the maternal passages, two or three days usually elapse before the disease breaks out; in other words, there is a latent period like what we see in small-pox and other communicable diseases.

During the late epidemic one patient had a rigor in 14 hours after delivery, another in 16 hours, a third in 17, and a fourth in 20 hours after. One patient died in 36 hours after delivery. Several

came in evidently in bad health, with a pulse weak and rapid, and complaining of pain from the moment of delivery. One private patient of my own had a rigor three days before delivery, and constant pain ever after.

Some of the patients who were refused admittance went home, were confined, sickened, and died, although not attended by any one connected with the Hospital. It is, I believe, admitted by all that there was an unusual amount of puerperal fever over the city and neighbourhood during the winter; one practitioner admitted having had nine deaths among the poor or middling classes, and another told me he had seen four women die in puerperal during the winter. When lately in Paris, Munich, and Vienna, I found they had had outbreaks of the disease similar to what we had experienced, only on a much larger and more fatal scale. The Professor at Vienna told me that 36 women had been attacked, during the winter, before delivery, and, as I have already stated, that it was most prevalent and most fatal in the department from which the students had been excluded.

The Professor at Munich mentioned to me a most interesting fact connected with the Hospital there; it was opened for the reception of patients for the first time in 1859, with new beds, blankets, and sheets, and a new staff of nurses. Yet scarcely was it open until they had a fearful outbreak of puerperal, which has visited them every year since. The epidemic had entirely subsided, both in Munich and Vienna, before my arrival. On asking the Professor at Vienna whether he thought the disease was induced or kept up by the students, his reply was short, but expressive. "We have the students always with us, the puerperal only sometimes."

The same reply is, I think, very appropriate to our own case, where we have the same staff of officers, nurses, and students now, as in the winter; where the same attention to cleansing, fumigation, and white washing in the wards is kept up,[a] and where the students are obliged to wash their hands in disinfecting fluid, in every ward, and on every occasion, before taking charge of a patient: but with how

[a] In the Dublin Lying-in Hospital the wards are occupied in regular succession. When the patients leave, the beds and bed-clothes are all removed, emptied, washed, and filled again with clean straw. The ward, and every article in it, is fumigated and washed: clean, well-aired sheets, blankets, and quilts are then put on, and after the ward has thus been purified and well ventilated for some days, new patients are again admitted.

different a result now as compared with the epidemic period. Then every patient in the house almost was attacked, now scarcely a quick pulse or a tender belly. During the last three months, we have had only two deaths in 250 deliveries in the house, among which we had cases of placenta previa, difficult labours, and turning cases.

If we admit that there is in all such diseases, whether epidemic or infectious, a latent period, and take into consideration the ordinary period of incubation in small pox, scarlatina, and such like diseases; and bear in mind, at the same time, the fact, that the symptoms of puerperal fever are often present even before labour comes on, or develop themselves in a very few hours after delivery, I think we will have forced upon us the conclusion that the poison has not been communicated by the fingers of the medical attendant or that of the pupil on duty, nor yet has it come from the walls of the hospital. In my opinion the poison is often taken into the system (however communicated) perhaps for days before labour sets in, and there lies dormant, being thus kept in this latent condition by some law of the system, the result of the pregnant condition.

May we not, therefore, fairly infer that puerperal fever possesses quite as much, if not more, of the epidemic as of the infectious character, and that we have yet much to learn both as to the nature of the disease, and the best mode of treating it.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Influence of Tropical Climates in Producing the Acute Endemic Diseases of Europeans, including Practical Observations on the Nature and Treatment of their Chronic Sequelæ, under the Influence of the Climate of Europe. By Sir James Ranald Martin, C.B., F.R.S., &c., &c. London: Churchill. 1861. pp. 778 Second Edition.

Six years have now elapsed since we drew the attention of our readers to the previous edition of Dr. (now Sir Ranald) Martin's standard work on the diseases of India. He had at that time proved that his medical—in the widest acceptation of the word—knowledge of India was such as had never previously been attained. The startling events which have occurred in that country within those six years have resulted in bringing it more closely under our immediate observation, and the important change in its mode of government has more intimately connected it with us.

In an address, lately delivered at Chatham by the Professor of Military Medicine, he is reported to have said:—"From this time forth from seventy to eighty thousand British soldiers will be employed in India; it is obvious, then, that *prevention* as well as *cure* of tropical disease must be a subject of anxious study to army medical officers." In this brief sentence we have summed up the object of Sir Ranald Martin's work, namely, the prevention of disease in those tropical climates in which our fellow countrymen now more than ever pursue, with their wonted enthusiasm and energy, those avocations which, while they perpetuate the memory of a Canning and a Havelock, are carried on at such disadvantages of climate, and of atmospheric and other unnatural influences, that but few Indian statesmen have been able to remain sufficiently long in the country to obtain that practical information so necessary for

the proper administration of its fiscal and judicial economy. Of those whom choice induces, or necessity obliges to remain, the mortality is nearly one in nine before they arrive at 50 years of age.

But it is to the loss which England will continue to suffer from the enormous death rate of her soldiery in tropical climates, or in any country where sanatory science is unknown or neglected, that we will, at last, be indebted for the recognition of the proper status of the army medical officer. We will not here bring forward the many instances—they are now matter of history, and our author does well to refer to them—in which the opinion and advice of competent medical officers have been systematically neglected, and, as a direct consequence, the lives of thousands have been sacrificed. We do believe that these days of injustice are drawing to a close.

We speak not of injustice to medical officers personally. Both justice and policy require that if "the difference between officers as combatants and surgeons as non-combatants" is to continue, the greater glory must be awarded to him who, while both are equally exposed to danger, in his zeal and anxiety for the welfare of others, neglects even the ordinary means of self-preservation.

On this point, also, we are satisfied that the wisdom of Bacon's sentiment will be at length practically acknowledged—"that just laws and true policy have no antipathy, for they are like spirits and sinews, that one moves with the other;" but we speak of the wrong done to the British soldier, and, through his loss, to the British nation, as exemplified in the loss of the Rangoon and Arakan armies, and elsewhere—and as will continue to occur until, in the words of Robert Jackson, "physicians have the place in the councils of military commanders that is due to science." That time cannot be much longer deferred; and if the rising generation of physicians are not capable of taking their seat at that council board, and retaining it with honour to themselves, and with credit and advantage to their country, it will not be the fault of Sir Ranald Martin.

The contents of this work on the influence of tropical climates are divided into four parts. The first is headed "Climate and Medical Statistics," and enters very fully into the nature of the climate of Calcutta, with general remarks on the causes of physical climate of Bengal, such as its general and local aspects, position of mountains, geological nature of the soil, the predominant winds, the rains, woods, and marshes of the Soonderbuns, &c., &c. It next

enters on the consideration of "Medical Climate, and Influence of Seasons;" and under this head are introduced three entirely new chapters on the important subjects of the sol-lunar influences, the electrical condition of the atmosphere, and the influence of atmospheric pressure—subjects at all times worthy of deep consideration, but especially so at the present moment, when the attention of the Indian authorities is so much directed to the question of the occupation of the hill ranges as permanent stations for European troops. We have no room here for the discussion of this most important question; but we feel bound to protest against the worse than absurd proposition of Sir William Denison, who, while he would with one hand move the seat of Government from Madras to the Neilgherry hills, would with the other move all the European troops from the hills, and, by giving up their splendid range of barracks, prevent almost a possibility of their return.

The remainder of this part contains much valuable and reliable statistical information on the influence of climate and season in producing sickness and mortality in Calcutta and in the Presidency of Madras; and ends with a few physiological observations preliminary to the consideration of the prevention of disease in tropical climates.

Part II. is altogether devoted to that more noble part of medicine, the prevention of disease; and into the consideration of this subject the author enters most heartily. He seems most fully to agree with Paley, that *health* is the one thing needful, and that therefore "no pains, expense, self-denial, or restraint to which we subject ourselves for the sake of health is too much. Whether it require us to relinquish lucrative situations, to abstain from favourite indulgences, to control intemperate passions, or undergo tedious regimens; whatever difficulties it lays us under, a man who pursues his happiness rationally and resolutely will be content to submit." But, as we already submitted in our notice of the former edition, it is not altogether, or even principally, to the preservation of *individual* health that attention is directed, but to the best mode by which organized bodies of men may be brought to, and kept in, the most perfect and efficient condition. This is a truly noble task for any author to undertake, and one which, if rightly performed, demands no small amount of gratitude.

Many who have thought on such a subject have been deterred from entering into the full consideration of it from feeling that it so abounds with what would be termed trifles that it cannot be made

attractive; but, while our author has not omitted the consideration of any point, however apparently trivial, he has, at the same time, put them forward in the most terse and practical manner. We copy, as an example, his remarks on *sleep*:—

"Whatever may be the opinions of martinets by sea and land, yet it is certain that the refreshment derived from a certain amount of sleep is as necessary to the mental and bodily vigour of seamen and soldiers, as the refreshment derived from a certain amount of food and drink. To the occasional privations of sleep, and to the limited and irregular enjoyment of it at all times, is referred, perhaps with justice, the aged appearance of seamen as compared to soldiers of like ages.

"Where and how to sleep, are the great considerations in the camp; for on the damp and cold soil, or exposed to malaria, disease comes rapidly and fearfully upon the soldier.

"Under hard labour, and on the march, the hour of retirement should be early, say, an hour after supper, so that the soldier may enjoy eight hours of sleep. Before Sebastopol, Mr. Wood states, that while the French soldiers were 'four nights off duty to one on, ours had about ten hours off to twelve on'—a circumstance which of itself would go far to account for the heavy losses of the British force employed.

"Sick, wounded, and convalescents should be allowed some additional hours of sleep: and so should soldiers who have undergone hard labour and inordinate exertion.

"From the circumstance that during sleep the power of generating heat in the system is diminished, much care should be given to the proper covering and clothing of the soldier, as well as to the condition of the soil; for, in tropical climates especially, it is in the night that the danger of contracting malarious disease is greatest.

"In the West Indian commands, where night duties and night exposure are believed to influence the health of the troops, the British soldier takes his tour of guards or pickets every third or fourth night, 'and every six hours stands sentry for two hours at a time.' The fact that the mortality of drummers is greatly under the general average among the rest of the troops, in the command referred to, has been ascribed to their comparative exemption from night duties; but it is probable that causes as yet unascertained operate in aid of the freedom from night duty so as in other ways to favour this class of soldiers.

"Ordinarily, and in time of peace, European soldiers in the East Indies are much exempted from night duties; but when on garrison employments at the head-quarters of the three Presidencies, or when employed at Aden, for instance, the night duties become occasionally heavy. Diseases of the liver and hands are stated by Dr. Arthur to have been much increased in Burmah, in the Madras European Fusiliers, by

the exposure attendant on night duties. He adds, that the men were 'on guard about every fourth or fifth day throughout the year.'

"Throughout the British colonies generally, the men, on an average, have from four to five nights of consecutive rest. In the East and West Indies, where soldiers who are natives of those countries are employed largely, the European should not be placed on guard and on sentry duties without a necessity, especially at unhealthy stations, and in unhealthy seasons."

The following are the well-advised remarks which he makes on the immoderate use of tobacco:—

"Young military men are apt to regard the habit as a manly one, until severe dyspepsia, giddiness, shattered nerves, sallow complexion, disturbed action of the heart, and other symptoms show themselves, and then it is frequently too late to stop.

. . . . . .

"Much is talked of the good effects of tobacco-smoking in damp and malarious localities, by persons who, in defiance of geographical differences, carry the habit wherever they go—from the marshes of Burmah to the arid plains of Hindustan, forgetting that, meanwhile, in the language of Cassio, 'they put an enemy in their mouths to steal away their brains;' but I think there is good reason to question the benefits of this habit of smoking even in the fatherland of fog and damp, or that tobacco ever acts as a preventive to any disease, and least of all to fever.

. . . . . .

"Damp and cold climates may confer a greater tolerance of, or partial immunity from, the evil effects of the drug, but this is perhaps all that can justly be admitted.

. . . . . .

"Of hookah-smoking I need say nothing, as happily its day is nearly gone; but I have seen many cases of severe constitutional and cardiac disturbance from its abuse, with perfect recovery of health on the discontinuance of the habit; the digestive functions, those of the heart and nerves, having been seriously affected in the most inveterate smokers. Of the miseries, mental and bodily, which I have witnessed in the persons of young officers, from the abuse of cigars, I will only say that they very far exceed those detailed in the 'Confessions of an Opium-eater.'

"Many persons flatter themselves that by long use such habits become a harmless second nature—the truth being that they can never become a second nature, *for they have nothing to do with the first*, as has been said of graver matters.

. . . . . .

"There can be no question, I think, as to the injuries inflicted on

health by the protracted or excessive use of tobacco in any of its forms. It may assuredly be classified amongst those substances which produce chronic poisoning.

"Mr. Solly, of St. Thomas's Hospital, regards smoking as the curse of the present age. 'Amongst the various insidious causes of general paralysis, smoking is one. He knows of no *single* vice which does so much harm as smoking: it is a snare and a delusion; it soothes the excited nervous system at the time, to render it more irritable and more feeble ultimately.'

"That the habitual abuse of tobacco leads certainly to mental and physical degradation is becoming daily a fixed impression in both France and England. In the Ecole Polytechnique and other public schools of France it has been proved that the youths who smoke fall behind in their studies, and that their healths are injured.

"'A hundred pounds of tobacco-leaf,' says Professor Johnstone, 'yields about seven pounds of nicotine. In smoking a hundred grains of tobacco, therefore—say a quarter of an ounce—there may be drawn into the mouth two grains or more of the most subtle of all poisons; and this dose, frequently repeated, cannot fail to injure the strongest constitution.' This authority adds that, besides this poison, many other hurtful agents and gases are carried into the mouth and lungs in the act of smoking tobacco.

"Dr. Prout states that 'tobacco disorders the assimilating functions in general, but more particularly, as I believe, the assimilation of the saccharine principle. I have never, indeed, been able to trace the development of oxalic acid to the use of tobacco; but that some analogous and equally poisonous principle, probably of an acid nature, is generated in certain individuals by its abuse, is evident from their cachectic looks, and from the dark and often greenish-yellow tint of their blood. The severe and peculiar dyspeptic symptoms sometimes produced by inveterate snuff-taking are well known; and I have more than once seen such cases terminate fatally with malignant disease of the stomach and liver. Great smokers also, especially those who employ short pipes and cigars, are said to be liable to cancerous affections of the lips.' Dr. J. P. Murphy states most truly that there is nothing more injurious to a flaccid heart than smoking, many cases being traceable to this cause alone.'"

Having considered in detail how the infringement of any of the natural laws, organic or moral, which connect man with the objects around him is sure to produce an increased rate of mortality in a country in which the military service is "of a severity unexampled in any army that is, or that ever was, in the world;" and having, what is no less important, shown how the observance of these

natural laws may be facilitated and accomplished, this part is wound up with two very practical sections on *The Term of Efficient Service in India*, and *On the Mortality and Management of European Children*. We quote the closing words of each section. As to the first point—

"Finally, and independently of the influences of climate, I believe, with Lord Macaulay, that official aptitude is everywhere acquired at the expense of the general powers, and that in all countries a fixed limit in years should be ordered, beyond which public service should not extend."

And as to the second point, on which, contrary to all experience, experiments are still made—and, against all well founded hope, hopes of success are still entertained, our author says:—

"On the subject of rearing children in India I would observe that all experience is against it—that it is altogether a cruel and an impracticable endeavour—and that I have seen several deaths result from the unnecessary attempt to wage war with the climate. Dr. Kenneth Mackinnon observes justly of the children of European soldiers in Bengal, that we have proof of the effect of the climate in their early drooping and decay. 'Even when there is no tangible disease, nutrition and oxygenation do not appear to go on favourably; the skin is pale, the muscles wanting in substance and in tone; the joyous spirits of the children are wanting—the body is inert, the mind listless.'"

Part III. is devoted to the consideration of Acute Tropical Diseases and their Cure. To the very important list of diseases treated of in the last edition there is added a chapter on the *Heat Apoplexy* or *Sun Fever*:—

"Direct solar exposure has been too generally and too exclusively assigned as the cause of this form of disease; but Campet speaks of it, under the term *mort subite*, as resulting in Europeans (given to excesses in eating heavy suppers, and in the use of wine and ardent spirits), during sleep under a high temperature, especially if, by closed curtains, they rendered the imprisoned air polluted and suffocative, thus depraving the circulating fluid, and producing a mortal syncope. In the East as in the West Indies, direct solar exposure is not necessary to the induction of sun-stroke, men confined in-doors during the hot season being also liable, especially under intemperance in diet, and in a calm, sultry atmosphere. The able and experienced Mr. T. E. Dempster, of the Bengal army, speaking of the prevalence of heat-apoplexy in the Mooltan division, under Sir William Whish, in the hot season of 1849, says:—

'During the first few marches a number of men fell victims to that fearful disease, and it is here worthy of remark, that the fatal seizures usually occurred about three o'clock in the morning, and long before the sun was above the horizon.'

"Dr. Dick, of Bengal, in a letter to Dr. Duncan, published in his Commentaries so far back as 1785, describes this disease as having been prevalent in a detachment of European artillery then serving in the Carnatic. In April, May, June, and July, the land wind blew so exceedingly hot and dry that life was hardly supportable at noon. The cholera morbus, dysentery, inflammations of the liver, and ardent, or what they call bilious fevers, became frequent in camp at this season. A species of apoplexy which seized the men when fatigued by marching in the heat of the sun proved, however, more fatal to the Europeans than any of the above. They complained first of great headache, in a few minutes a vertigo and bilious vomiting came on; they dropped down breathless, turned comatose, and unless immediate assistance was given, the face swelled, and turned almost black; the pulse, which was at first full and quick, sank; and after some hard struggles for breath, they expired. Such is the substance of one of the earliest descriptions of coup-de-soleil in the East Indies.

"The increased feebleness of the heart's action, as the disease advances, has been noted by several of the American writers; and there can be no doubt that feebleness of the respiratory function advances in corresponding accord, so as speedily to overwhelm the sufferer."

It is obvious, with such symptoms, that coup-de-soleil does not consist, even in the majority of cases, of a primary affection of the brain, and accordingly we find that the *post mortem* examinations exhibit fibrinous coagula in the heart, extreme engorgement of the lungs, amounting, in some instances, to extravasation of blood or pulmonary apoplexy, the brain being also considerably congested, but in a less degree. Our readers will find the subject most fully discussed—its history, causes, treatment, &c., &c.—and last in order, but first in importance, its prevention.

Thus far the object has been "to explain the origin of those formidable diseases which, under tropical influences, affect the stranger European, and to trace them to the altered physiological actions induced by an unnaturally high range of temperature and other causes which, during a residence generally protracted, disturb the various functions on whose just balance health must everywhere depend.

We come now to the fourth or concluding part, in which are considered the chronic diseases of Europeans on their return from

tropical climates, and their cure. The task laid down in this chapter is—

"To examine the converse of all the preceding—the reverse of everything that holds under tropical influences—to describe the flow and ebb of excitement—the inertia, approaching to a collapse of the various functions of the body, which follows as a necessary consequence of the previous tumultuous action—and to describe both the condition and the treatment of the tropical invalid on his return to his native climate. In short, to trace the peculiar physiological circumstances that have led to the state of ill health common to tropical invalids, and also to explain the real or essential nature of their diseases; and, finally, to detail the special conditions to be regarded in their treatment."

An accurate perusal of this chapter will well repay all British physicians; for, while many of us may consider that we have no direct interest in the prolongation of life in India, or the treatment of diseases which may occur in tropical climates, we must all expect to be called on to treat invalids who have returned suffering from diseases contracted in those countries.

Where all is excellent it would be easy to give extracts to prove how fully each subject has been considered.

"*Vere scire est per causas scire*" has been our author's motto throughout. He has, in each case, made a full investigation into the causes, proximate and remote, of each disease which he treats of; and while he gives to pathology and morbid anatomy their full weight and due importance, he is himself guided in his clear and practical remarks on treatment by the quotation which he strongly recommends to his readers, "that morbid anatomy, and even physical signs, are very unsafe guides to trust to exclusively in the treatment of disease. There are symptoms and external signs in fever, for instance, which are more declarative of the true quality of the disease than sounds appreciated by the ear or *post mortem* revelations. The adage adopted by Trousseau, that '*naturam morborum remedia ostendunt*' is to the clinical observer the most practically important."

We said at the commencement that if Sir Ranald Martin were able to carry out efficiently the programme which he had laid down for himself he would deserve gratitude, and we now return him our hearty thanks for this truly valuable book. Such works as this it was which Dr. Latham—in perhaps the most valuable introductory lecture ever delivered—looked forward to when he said:—"The

medical men of England do and will continue to keep pace with the age in which they live, however rapidly it may advance in the course of improvement."

Traité Pratique des Maladies de l'Estomac. Par T. Bayard, Docteur en Médecine de La Faculté de Paris, &c., &c. Paris : Victor Masson et Fils. 1862. 8vo. pp. 478.

"We cannot conceal from ourselves the fact that the diseases of the stomach are still one of the most difficult branches of the art of medicine." Such is the profession of faith with which Dr. Bayard commences his work upon those diseases; and, however we may try to excuse or modify the fact, we must admit that a complete analysis of "the stomach and its difficulties," is a problem which, notwithstanding the labours of so many eminent writers on the subject, continues still a desideratum in medicine. Of late years, several valuable publications have appeared, both in these countries and abroad, in which all the resources of medicine and its affiliated arts have been directed towards an approximate solution of this question; and we receive the present treatise with pleasure as a contribution from a talented member of the Faculty of Paris, in which, without professing any claims to original discoveries, the whole subject has been handled in an acceptable and practical form.

The difficulties which we meet with in exploring the diseases of the stomach are both natural and acquired. The first arise from the wide associations of this organ with the system as the centre of sympathy and support; in the apposite words of the motto prefixed to the present work, "Veteres stomachum ut regem totius corporis salutabant." In addition to this, the aids upon which we rely for diagnosis are as yet very incomplete; though, from the light thrown upon the digestive processes by pathological chemistry, we anticipate that it is to this science we are chiefly to look for future discoveries. Of the *acquired* difficulties, we do not consider the least detrimental kinds to be the influence of ill-founded hypotheses, whose only title to consideration is their novelty, and which the fashion of the day swells out into undue proportions, destined to a total collapse when the taste for them has gone by. These "systêmes en vogue" have been noticed by our author in his

preface as impeding our progressive knowledge of gastric diseases. "Les gastrites et les gastralgies" have had their day, it appears, in France; and "aujourd'hui nous sommes dans le courant de la dyspepsie." The consequence of this is, he continues, "that we are insensibly led on to form varieties of it of every kind." But what can be more injurious to any science than too many subdivisions? We thus exalt mere varieties into specific forms, so as to be an incumbrance to us rather than a help. "Dans les sciences, un langage clair est une des premières conditions de leurs progrès." Medical nomenclature ceases to be clear when, as has been observed by an illustrious countryman of our author, Victor Cousin, the ideas which it represents want simplicity, strictness, and precision.

As an exemplification of the inconsequence of establishing divisions upon the predominance of certain symptoms, Dr. Bayard takes *flatulence*. "Every one knows," he says, "that this symptom can arise from muscular atony; from the ingestion of fermentative substances or their chemical decomposition; from a simple excess of food; a too great dilatation of the organ or the reverse; a temporary disturbance of the innervation, &c., &c. We ask," he adds, "is it rational to describe a *flatulent dyspepsia?* The question answers itself; and we may say the same of nearly all the other forms which are most frequently produced by the nature of the ingesta."

We need not take a better illustration than the above of the difficulty of fixing the art of medicine upon a purely scientific basis. Here we find a certain effect, not limited apparently to a single cause, but capable, as far as we know, of being associated with a plurality. Now if, as Bacon seems to suppose, there is but one cause for an effect, which of the above stands to the example given in the light of its efficient cause? May we not, therefore, be acting inconsistently in viewing them all as causes? If, on the other hand, the effect may arise from a plurality of causes, how can we successfully administer a therapeutic agent, except empirically, which should fulfil such contradictory and embarrassing indications?

In perusing the table of contents, we perceive that the author has divided his book into twenty-four chapters. His aim is obviously a wide one, namely, to give a complete account of the stomach, both in its sound and in its diseased conditions. The first nine chapters are occupied with the anatomical and physiological description of that organ: the nature and properties of the gastric juice; the effects of sympathies and moral impressions upon diges-

tion; the state of the urine in certain gastric disorders, and the examination of the leading symptoms, such as—pain, flatulence, pyrosis, rumination, nausea, and vomiting, &c., &c. The six following are devoted to the functional disorders, and contain indigestion, l'embarras gastrique, and dyspepsia, with its varieties. The organic diseases occupy the next seven chapters in order, and consist of acute and chronic gastritis, softened conditions, ulcerations, and perforations, dilatation and rupture, hemorrhages, cancer and its kindred states. A chapter follows upon the nervous affections of the stomach, and the work is closed with a chapter on regimen and alimentation.

In commenting upon this extensive programme, it occurs to us that the amount of consideration given to the several subjects does not bear a suitable proportion to their relative importance and danger. For example, the whole of the organic diseases are included in about a fourth part of the book. We must, however, admit, that much of the symptomatology of these diseases is discussed under distinct and separate heads. This arrangement may be admissible in a work on diagnosis, and we readily grant that very few, if any, of the affections of the stomach possess an exclusive title to any one symptom, so that this class of stomach symptoms may be discussed in a general view, without danger to the unity of each disease; still it is open to the objection that such a course fixes our attention on the symptom more than on the disease, upon the sign more than on the entity; we fear that the admission of this method into works upon the practice of medicine would lead to empirical treatment. We would content ourselves in meeting the urgent requirements of the symptom without taking a comprehensive view of the disease. The author, indeed, perceived that the objection is a feasible one, and he partly anticipates it by explaining why he did so, "pourquoi nous avons traité de quelques symptômes séparément." It is but just to give his explanation in his own words.

"Il est peu de médicins, qui après avoir exercé leur art, même pendant un temps assez court, n'aient été frappés de ce fait: que les symptômes gastriques les plus menaçants et les plus graves en apparence peuvent exister et même durer un temps considérable sans pour cela qu'il y ait autre chose dans l'estomac qu'un simple dérangement fonctionnel; tandis qu'au contraire, on y rencontre les affections organiques les plus formidables sans qu'elles se soient révélées, pendant la vie, par aucun symptôme bien tranché. C'est

pourquoi, sans préjuger de la gravitè de certains accidents qui se montrent avec une prédominance tellement marquée ou une intensité si vive que les malades y rapportent toutes leur souffrances, nous avons cru devoir considérer séparément quelques-uns de ces symptômes, en indiquant les meilleurs moyens pour les combattre et cela, au risque d'être obligé de nous répéter plus tard, ce que nous pourrons faire alors, d'une façon plus laconique."

With the preceding general remarks upon the scope of Dr. Bayard's work, we shall make some selections from the more practical parts, as our limits preclude us from undertaking an analysis of all the subjects contained in the volume.

The third chapter contains an account of "the gastric juices," but it is more practical than analytical. He does not enter into the disputed question of the nature of its free acid, he allows it a sort of catalytic action, namely—"That without being efficacious by itself, its presence appears indispensable for the accomplishment of the function." For instance, digestion is interrupted by the neutralization of the acid, and is again restored by setting it free. In experiments made in closed vases, almost any acid, provided it were sufficiently diluted, equally fulfilled the indication.

We are disposed to think that Dr. Bayard rather underrates the rôle performed by the free acid in the digestive process. In the ably conducted experiments of Drs. Bidder and Schmidt, it was found that dilute muriatic acid, which, according to them, is the acid *par excellence* of the gastric juice, dissolved, after 20 hours' immersion, about a quarter of the amount of albumen which the gastric juice dissolved during the same time; the same accurate observers also found that the digestive force of the gastric fluid was in direct proportion to the acid it contained.

Dr. Bayard offers a remark upon the destruction of the solvent property of the gastric juice by high degrees of heat, which has some practical value—"We ought to recommend persons whose digestion is difficult, not to take nourishment too hot, since a heat of 50° centigrade suffices to annihilate the power of the principal agent of digestion, and it is not rare to see some persons taking tea or coffee at a temperature probably much higher.

He offers some indications which may guide us in the administration of the gall of the ox or of other animals as a medical agent. "In the state of perfect health, we never meet with bile in the human stomach, although various causes can make it come there. In small quantity it facilitates the digestion of certain substances,

such as fatty bodies; but if its reflux be considerable, it occasions giddiness, nausea, and vomiting; furthermore, as it neutralizes the acid of the gastric juice, it renders the functions of this last impossible." It has been ascertained by the researches of the same indefatigable observers whom we have mentioned above, that the effect of the admixture of bile with the gastric juice, even though it is not to the extent of neutralizing its free acid, is utterly to annihilate its powers. It would appear from this that the proper indications for giving ox gall would be a super-secretion of gastric juice; the author also proposes to give it to correct the fatty acids, such as the butyric, which can be detected by their odour in eructations.

In the chapter on constipation, he advises the use of the same agent when the constipation arises simply from defective biliary secretion. He gives the following directions for prescribing it in pills:—

"On doit les donner en nombre suffisant pour atteindre la dose d'un demi-gramme à 1 gramme a chaque repas; on y associe contre la constipation, un dixieme de savon médicinal ou de scammonée diagrède, et quand il y a paresse ou relâchement des organes digestifs il est bon d'y joindre quelque extrait amer comme ceux de taraxacum ou de gentiane."

In the same chapter he recommends, in cases of great obstinacy of the bowels, the use of "mèches," smeared with simple cerate, or with cerate to which is added a fifth or sixth part of extract of belladonna. "We have seen," he remarks, "in several cases of stubborn bowels, this practice crowned with complete success."

There are some excellent observations upon the use of mineral waters, and their value in cases of rebellious dyspepsia. As a general rule, too much neglected, he advises us to spare the suffering organ those large quantities of fluid which are wont to be taken at Ems or Vichy, and the greater number of fashionable spas. At Plombieres, the means of cure are limited to baths and douches, and with excellent effect. If, after two or three weeks at Plombieres, digestion remains laborious, the neighbouring waters of Bussang, used sparingly at meals, will fulfil every indication.

In certain cases of weak digestion the effect of those mineral waters, which are gascous or slightly alkaline, is improved by the addition of a third or fourth part of wine; for instance, the waters of Bussang, Seltz (of such great celebrity in Paris), and others. They are thus rendered agreeable to the taste, and do not alter the qualities of the wine. Nay, more, he allows the sparing use of

sugar in certain cases. "Some stomachs are all the better for a small addition of sugar, especially when there exists any tendency 'au dévoiement.'" We have often been amused at seeing a novice quietly slipping in a lump of sugar into his brimming beaker when he thought himself unperceived, and evidently congratulating himself on his skill in "doing" the doctor. But if the patient suffer from acid dyspepsia, even this very moderate indulgence must be rigidly denied him—"in that case the strongly alkaline waters of Vichy merit generally the preference, and the sugar ought to be interdicted."

The chapter upon the state of the urinary secretion in gastric ailments is principally occupied with remarks upon the oxalic diathesis. We shall not dwell on it, as the author acknowledges his obligations to Dr. Begbie for much that the chapter contains. We regret to find that the labours of Golding Bird, Rees, Jones, Aldridge, and other successful pioneers in this branch of chemical pathology, seem almost wholly unknown to the writer; but we are bound to thank him for introducing Dr. Prout's treatment of oxaluria more fully to his countrymen.

We turned with some curiosity to the eleventh chapter, "De L'Embarras Gastrique," a name as widely applied in France to stomach affections, as dartres to cutaneous eruptions, or influenza, with us, to all forms of epidemic catarrh. Indeed the name "l'embarras gastrique," suggests rather vague conceptions to many persons in this country, and even by some is regarded as a species of myth; however, in the author's description we were glad to recognize, under the disguise of "gastric embarassments," our old acquaintance, *a bilious attack*, or, as some term it, an overflow of bile. Dr. Bayard divides it into bilious, mucous, and a compound of both, and looks on emetics as almost specific. In cases where this remedy is contraindicated he proposes to substitute "l'emetique en lavage," that is, the emetic in a small dose, and a large supply of the vehicle. For instance, five centigrammes (about a grain) of tartar emetic are dissolved in one litre of veal broth or lemonade, and ten or twenty scruples of the sulphate of soda or magnesia are added. This is to be taken at intervals in doses of a quarter or half a cup—short, however, of producing vomiting.

The author, in his account of acute gastritis, does not distinguish its two typical forms, namely, catarrhal inflammation, a name proposed by Rokitanski, and acute idiopathic gastritis; the former, in which the surface of the mucous membrane is attacked, and the

latter involving its whole substance. His account of its etiology is very good. One of the direct causes which he notices is the effect of ices taken while the person is in a state of copious perspiration and in an elevated temperature, "some years since a number of persons, during the excessive heat, having partaken of ices at the Palais Royal, were attacked with gastritis of a very acute form; the authorities made inquiries, and the only cause they could discover was the contact of the cold drinks upon the mucous membrane while the body was profusely perspiring."

As our author advises, for the cure of the ailment, iced drinks, slowly swallowed, and ice in bladders, applied to the epigastric region, the homeopathists may quote this as an instance of "similia similibus curantur."

We notice his remarks on ulceration of the stomach for the purpose of mentioning an important case described by Dr. Hughes, of London, and quoted by the author in full, as one of the most valuable clinical cases on record. It was a case of perforation of the stomach, treated with opium and absolute rest, after the plan proposed by Dr. Stokes of Dublin, and to which we beg to refer the reader. Dr. Hughes, however, could hardly recognize his cognomen under its Parisian modification of Hugues.

The concluding chapter on dietetics is the most interesting in the volume. He suggests that extensive tables of various articles of food should be drawn up for general use, showing at a glance their comparative nutritious and respiratory properties. In these tables arrow root stands as having one proportion of nutritive material to twenty-six of heat-making—a sufficient condemnation of its extensive use in the nursery. His medical regimen is excellent, though we could, in these countries, scarce stomach his decoction of the thighs of frogs as a delicacy for the convalescent chamber. We shall conclude with an interesting anecdote which is given by him to illustrate the effects of national scales of dietary upon the physical stamina of the people:—"A friend of ours had the medical superintendence of one of our largest lines of railway. The first works were confided to English workmen, and close by French workmen were placed, but it was soon remarked that the first executed as much again of work as the second. There was no possibility of being deceived, for it was task work, and both worked apart on embankments. Much surprised, he says, at such a result, we inquired of our confrere the cause. It was very simple—the English lived on roast beef, and the French only eat soup and

vegetables with a little bouillie. On the French adopting the English diet their amount of work became equalized."

We now take our leave of Dr. Bayard, thanking him for the pleasure we have had in the perusal of his valuable work. We cordially recommend it to our readers, as conveying a large amount of information upon the subject of which it treats, and communicated in a clear and agreeable style.

Clinique Médicale sur les Maladies des Femmes. Par M. G. BERNUTZ et M. E. GOUPIL. Paris: Chamerot. 1862. Vol II. pp. 771.

Medical Clinique on the Diseases of Women. By MM. BERNUTZ and GOUPIL.

IN our February number of 1861, we had the pleasure of reviewing the first volume of the above named work; the second volume is now before us, and we shall proceed to give our readers as careful an analysis of it as it deserves. The first subject treated of, is what the author calls pelvi-peritonitis, synonymous, apparently, with the peri-uterine phlegmon of Nonat, and the pelvic-cellulitis of British writers, which last name he evidently considers utterly inappropriate, as the seat of the so-called peri-uterine phlegmon is not, according to the author, in the pelvic cellular tissue, but within the peritoneal cavity itself, bounded by the agglutinated viscera, and the parietal peritoneum; a pathological fact which he has been able to establish by *post-mortem* examination. Having asserted this much, he at once proceeds to illustrate his position by a number of cases, which occupy, together with his observations on them, no less than 445 pages of closely printed text. The first cases are some of those which he was enabled to examine after death, and as they seem to be of the most instructive, we shall supply our readers with a condensed translation of two of them.

CASE I.—"A girl, aged 18, of lymphatic temperament, who never had suffered from any uterine disease, but, on the contrary, always enjoyed fair health, applied for admission into hospital on February 12th, 1856, in consequence of having contracted venereal. From a variety of circumstances she was able to ascertain with precision that she must

have contracted the infection somewhere between the 20th and 25th of January previous. On the last-mentioned day she remarked that the leucorrhea, from which she had sometimes suffered, was altered into a thick, greenish discharge, quite different from anything she ever had before. She did not however lay up, or take any care of herself, until compelled by general indisposition, accompanied by sharp pains in the lower part of the abdomen, which were aggravated by walking and by going to stool, which pains had set in about eight days after the invasion of the green vaginal discharge. These abdominal pains becoming worse, as also the pains during defecation, and finding it almost impossible to walk, she applied for admission into hospital, about twenty days after the commencement of the disease. On examination she was found pale, with an anxious expression of countenance, and slightly feverish; no nausea or vomiting; appetite fair. She principally complained of pain occupying all the inferior portion of the abdomen, especially to the left side; this was greatly increased by motion, by pressure near the hypogastric region, and by going to stool; no external tumefaction anywhere; inguinal glands normal, as also the external parts of generation, as well as the anus. The lining membrane of the vagina was bright red, and secreting an abundant muco-purulent discharge, which left a greenish-yellow stain on the linen. The entire of the vagina was of a bright red colour, but free from any erosions. The neck of the uterus was small, conical, and soft, and in its right place; the os was normal, with a very slight erosion on its under lip. On making a digital examination of the vagina, the finger, when directed into the anterior *cul-de-sac*, was immediately stopped by a firm unyielding, rounded mass, separated, however, from the neck itself by a deep sulcus. On carrying the finger round to the left of the neck of the uterus, the same rounded mass was every where met with, filling up the interval between it and the wall of the vagina; it passed right round under the neck, and there terminated suddenly by a bulging extremity, thus enveloping the neck of the uterus for about four-fifths of its extent; all examination of this tumour produced excessive pain, while pressure on that part of the neck of the uterus on the left side, which was not implicated in it, could be well borne.

"The treatment adopted consisted in absolute rest, 15 leeches to the left iliac fossa, a linseed poultice over the whole of the abdomen, middle diet, with wine and milk. The leeching relieved the pain a little, but on examination the tumour could still be found of the same size, and extremely tender to the touch. By the 20th of February, eight days after the patient's admission into hospital, all abdominal pain had nearly ceased, but on the 21st it suddenly returned as violent as ever; the previous plan of treatment was resumed, and, in a few days, the pain was again considerably assuaged. She continued in this state until the

19th of March, when she was suddenly attacked by pleuritis with effusion, further complicated by jaundice. The pleural effusion having rapidly increased, and the patient being in danger of suffocation, thoracocentesis was practised on three occasions, to the great temporary relief of the patient, who finally died, however, on the 12th of May, run down by hectic fever and diarrhea. Thirty-six hours after death an examination was made of the body, when the following conditions were found:—the pelvic viscera were all agglutinated by innumerable adhesions of old date, and in the midst of these was a voluminous encysted abscess filled with thick pus, and the outline of which corresponded with the tumour which was felt through the vagina during life. The uterus, although considerably anteflexed, was perfectly healthy, as was also its cellular tissue, and that of both broad ligaments. The ovaries too were healthy, but the right Fallopian tube contained two small collections of pus near its uterine end, while its fringed extremity, which was everywhere closely adherent to the corresponding ovary, was distended with pus of a greenish colour; the left Fallopian tube was also adherent to its corresponding ovary, but contained no pus."

The author concludes from the foregoing cadaveric appearances, added to the phenomena observed during life, that this case was analogous to one of orchitis in man. The hemorrhagic pus he thinks made its way from the vagina into the uterus, and up through the tubes, until it collected in the fringed extremities of both, when, having burst through the Fallopian extremity of the *left side*, it gave origin to the abscess discovered there after death.

Case II.—"A young woman, aged 19, who had always enjoyed excellent health, applied for admission into hospital on the 30th of January, 1855, in consequence of a venereal affection contracted some months previously. She suffered from sore throat and pretty severe vaginitis, accompanied by ulceration of the labia, and some slight erosions of the os uteri; the uterus itself was, however, of normal size, and in its right position, whilst no obstruction could be felt in the vaginal *cul-de-sac.* On the 2nd of February she was considerably improving under mercurial treatment, and by the 12th she was fully under the influence of the mineral, when suddenly, on the 13th, she was seized with wandering pains in her back and the lower part of the abdomen, these continued till the 16th, when, after repeated rigors, she was attacked by a sharp pain in the right iliac fossa, which was increased by the slightest motion, inspiration, or cough. The patient lay quite motionless on her back; her face was drawn and anxious; her eyes hollow and sunk; her tongue was covered with a grey fur; she had no appetite, but neither had she any

nausea or vomiting; her bowels were constipated; pulse 108, small and weak; temperature normal; her breathing was suspirious, short, frequent, and superficial, evidently to spare herself the sharp pains which she experienced in the right iliac fossa on taking a deep inspiration. All manipulation of the right iliac fossa was almost interdicted, in consequence of the extreme pain it induced; still, a sufficient examination was made to establish the presence of an oblong tumour, hard and resisting, occupying apparently the site of the right broad ligament. Whilst all examination of the right iliac fossa was so painful, the supra pubic and left iliac regions could be freely manipulated with scarcely any pain. The fundus of the uterus could be felt of normal size. On passing the finger into the vagina, which felt very hot, and on directing it upwards and backwards into the posterior *cul de sac*, a tumour was felt, surrounding the posterior third of the neck of the uterus; it was rounded, firm, and extremely painful on pressure. The treatment consisted in lemonade, 15 leeches over the left iliac fossa, bath, constant poultices, and *no food* (*diete absolue*). On the 20th the patient seemed rather better, she had slept, and her face was less anxious and haggard; there had all along been considerable discharge from the vagina, but this morning it had greatly increased, without, however, acquiring a purulent character. A vaginal examination being made with the finger, it was found that the tumour did not descend so low down behind the neck of the uterus, and could be pressed upon without causing pain. By the 28th matters had still further improved, and the womb had returned to its normal place, and the discharge was gradually diminishing, when she was suddenly attacked by small pox, under which she eventually sank on the 27th of March. A carefully conducted *post-mortem* revealed about the same conditions as in the previous case—peritonitis of the pelvic cavity, with great agglutination of its viscera, and pus in the Fallopian tubes; whilst the cellular tissue of the uterus was healthy; it was not, therefore, a case of peri-uterine phlegmon."

We cannot follow the author much further through his 458 pages of cases and observations, by which he endeavours to prove that those peri-uterine tumours, which have been called phlegmon, and supposed to depend on inflammation of the cellular tissues of the uterus and broad ligaments, depend on the effusion of pus or other fluid (generally through the Fallopian tubes, or from diseased ovaries) into the peritoneal cavity, where they give rise to those peritoneal inflammations and consequent agglutinations of the pelvic viscera described above. As for the treatment recommended we cannot subscribe to it, except in very general terms; the author is much too fond of scores of leeches, and *diete absolue*, and we

have no doubt on our minds, that many of the cases recorded might have had a happier issue, but for the heroic Sangrado system adopted.

The second portion of this volume is devoted to the consideration of uterine deviations; we do not find much worth recording in the 300 pages taken up. At page 448 he asserts, that "anteversion is a very frequent condition of the womb in women who have borne children; it produces often no appreciable inconvenience," except, as he says further down, such displacements be accompanied by uterine congestion, or other abnormal condition of that viscus. Lower down he recounts some interesting cases, apparently of engorgement of the womb with excessive mobility, in which there was anteversion in the erect posture, and retroversion when lying down. At page 526 he commences the subject of retroversion in the following words:—"retroversion is very much rarer than anteversion; besides which, it is almost always a symptomatic affection." . . . . Of 115 hospital patients (*nulliparæ*) admitted into hospital for deviations of the womb, our author found only three suffering from retroversion; and of them one suffered from a uterine polypus, while the other two laboured under retro-uterine pelvic-peritonitis. We cannot agree thus far with Dr. Bernutz, that retroversion is, first, so very rare; and, second, that it rarely occurs except in consequence of uterine polypus, or of peri-uterine phlegmon. No doubt any cause which renders the womb abnormally heavy, will be a likely source of displacement, but we have seen many cases of retroversion, independent of the causes enumerated by the author; and we regret to say, that we have not found this uterine displacement so unfrequent in these countries as it would appear to be in France. The author has an undisguised horror of the hysterometre or uterine sound, and all intra-uterine pessaries; and although he seems to be aware that increased size of the womb is at times a cause of its malposition, he does not appear to be aware of the value of iodine, as a local application.

Dr. Bernutz deserves great credit for the labour he has devoted in collecting cases, not only from his own practice, but from that also of his colleagues and friends, although we do not always draw the same conclusions which he deduces from the facts related. It is to be regretted that his style is so verbose, prolix, and wearisome; and if even a translation of the work should be attempted, we trust that it may be considerably condensed; but all notwithstanding, we recommend the perusal of the *recorded cases* to those who make "Diseases of Females" their special study.

Ueber die Verschiedenheit der syphilitischen Krankheiten. Von Professor Dr. Lindwurm, Vorstand der Klinik für syphilitische und Haut-Krankheiten in München.

On the Diversity of Syphilitic Diseases. By Professor Lindwurm, Director of the Clinique for Syphilitic and Skin Diseases in Munich.

Professor Lindwurm, whose position as Physician to the Clinique for Syphilitic Diseases and Diseases of the Skin in Munich give him extensive opportunities of observation, has devoted much care to determining the distinction of the forms of syphilitic disease.

He commences his brochure on this important subject by alluding to the fact of the term syphilis having different meanings attached to it. By some it is applied to chancre (primary syphilis), and the constitutional disease (secondary and tertiary syphilis) which, according to their views, spring from it. Others employ the word in a more limited sense, restricting it to the constitutional disease, in contradistinction to simple chancre and gonorrhea, which they look upon as local lesions. By others, again, the term syphilis is used as of similar signification with the almost obsolete "venerie," and under this general name include the three diseases, as gonorrhea-syphilis, chancre-syphilis, and constitutional-syphilis. In this general sense syphilis is used by the author. Gonorrhea he dismisses altogether, as it requires no proof to determine that it is a disease altogether different from chancre and constitutional syphilis; conflicting opinions, however, exist as to the two latter. Some (the "Unitarians") holding that chancre and constitutional syphilis are *one*, and are produced by the *same* poison, while others (the "Dualists") contend that there are two different poisons and two distinct diseased states depending on them. To settle the disputed point as to the identity or diversity of the diseases is the object which Dr. Lindwurm has endeavoured to attain by his carefully conducted clinical researches.

He first describes *local chancre-syphilis.* There are chancrous ulcers, which, according to the doctrine of the "Dualists," are *never*, and according to the "Unitarians" seldom, followed by constitutional disease. These are the simple or soft chancres; they occur soon after the poison is brought in contact with the part—from one to two days after it is introduced by the lancet under the skin, or

by coitus brought in contact with an abraded surface, or by any other means. The simple chancre extends its influence only to the neighbouring parts in the form of lymphangitis, adenitis, with infiltration of the cellular tissue, and formation of abscess. All these consecutive diseased conditions present the same virulent character; the secretion, or the purulent matter of the lymphatic glands and cellular tissue, has the same effect as the secretion of the original ulcer, and is capable of exercising its influence on the healthy or on the locally or generally syphilitic.

These diseased conditions may continue weeks or months, and give rise to the most serious disturbance; but still there is no general contamination of the system. The *constitutional* syphilis is then contrasted with the former.

It is also a communicable disease, according to Dr. Lindwurm; but, as its name implies, of a general nature. It infects the whole organism, depositing its products in almost all tissues and organs of the body—lymphatic glands, skin, mucous membrane, cellular tissue, bones, periosteum—the different organs, brain, eye, liver, lungs, kidneys, testes, &c. Constitutional syphilis, as *such*, is propagated from the diseased to the healthy. Clinical experience and experiment have established the contagious nature of the disease. Not merely are the products and secretions of lues capable of communicating the disease, but the blood also, and possibly the seminal fluid. Hereditary syphilis affords proof of the transmission, by the blood, of the poison.

How long the communicable character clings, and whether the slow, so-called tertiary, forms can be transmitted, are still unsettled points.

The *possible* transmission of the poison of syphilis by the vaccine matter, or at least by the mixture of blood with it, would seem to be proved by the distressing event at Rivalta. Three weeks after vaccination syphilis appeared in 46 children.

Dr. Lindwurm looks upon the researches and experiments of Waller, Rinecker, Hübbet, and the much earlier investigations of Wallace of Dublin, as having established the contagious quality of constitutional syphilis by the most irrefragable evidence. He has himself enjoyed the opportunity of witnessing the transmission of constitutional syphilis, in five cases, by means of inoculation. In all respects the phenomena agreed with those observed by Wallace, Waller, Rinecker, Hubbenet, Von Barensprung, and others In observing the effect of inoculation of constitutional syphilis and

simple chancre poison the following characters are relied on to establish a fundamental difference:—1. Between the inoculation of constitutional syphilis and the first manifestation of the diseased action at the site where the poison is introduced there is a longer interval—on an average three weeks; the long incubation stage then contrasts remarkably with the almost absence of it after the virus of simple chancre. 2. The poison of constitutional syphilis appertains, not merely to the pathological products of disease (ulcers condylomata, &c.), but also to the physiological formations (blood, semen). The poison of simple chancre confines itself to the secretions of the virulent ulcer. 3. The primitive forms at the site of introduction of the poison show the most striking difference. The simple chancre begins as a vesicle or little pustule, distinguished by destruction of tissue, disposition to formation of matter, and its rapid course. This is the chancre *κατ'εξοχην—ulcus syphiliticum virulentum.* The constitutional syphilis presents, from the first, a more chronic course—the formation of a circumscribed papule with little disposition to spread by ulceration, its development depending on the nature of the tissue, on the form, depth, and size of the infection-wound, on the condition of the patient, and on the treatment employed; left to itself, not cauterized, it extends slowly, not secreting pus, but casting off scales, and finally presents the appearance of a firm, dry tubercle. In other cases, when the primitive papule is seated on moist parts of the skin, and subjected to irritation, it passes directly into the broad condyloma. This occurs much more frequently in the female than in the male. Dr. Lindwurm would expunge the word chancre from the nomenclature of constitutional syphilis. It should be confined altogether to the soft, simple, virulent, syphilitic ulcer. The indurated ulcer is but a symptom of constitutional syphilis—and the first; but it should be remembered that the disease may develop itself without an ulcer—tubercles, mucous papulæ, and broad condylomata being the primary forms. The poison of simple chancre seizes upon the syphilitic as well as the untainted. A person labouring under constitutional syphilis cannot be infected a second time until the syphilitic diathesis is extinguished. The same holds good in respect to it as measles, smallpox, and scarlatina. It happens sometimes that an individual who has been cured, but who still bears the marks of constitutional syphilis, again takes in the poison, which manifests itself by indurated ulcer, swelled glands, and roseola.

An interesting point is the fact that there are persons who enjoy a

complete immunity from the disease. What an enviable gift to some! Dr. Lindwurm records one remarkable instance of this in the person of a female who underwent no less than 11 inoculations with virus of simple chancre, in different parts of the body, with negative result. Whether the same immunity exists as to constitutional syphilis he is not prepared to assert, but he believes it likely.

The next subject discussed is the possibility of a double infection, the result being a mixed chancre. There is no positive proof of the simultaneous infection of one wound with the two poisons; but it may be considered physiologically as possible as the simultaneous introduction into the system of syphilis and vaccinia. As a person can be infected with the two poisons on different parts of the body—the mouth, for example, with constitutional ulcers, the genitals with simple chancre—so can two poisons be introduced by one and the same wound. In such a case the simple chancre ulcer would appear at the site of inoculation; and, after the incubation stage of constitutional syphilis (three to four weeks), the specific induration would set in.

Dr. Lindwurm states that he has under his care a case which illustrates this: a man who, after coitus with a woman labouring under simple chancre and constitutional syphilis, presented, immediately after connexion, the simple chancre, and, in the course of some weeks, the indurated ulcer.

Touching the diagnosis, the author believes that syphilitic ulcers are not to be diagnosed by their appearance and by the feel alone. Inoculation is a valuable but not an absolute diagnostic means.

The conclusions which Professor Lindwurm arrives at are opposed to the views of Ricord and his followers; he supports his theory, however, by well and carefully recorded cases, and with much ability. The learned author is a man who possesses no ordinary talent; and, moreover, is endowed with energy and zeal in the pursuit of knowledge, as we ourselves can testify, from the manner in which, some years since, he devoted himself to the investigation of typhus fever in Ireland.

I. *Selected Monographs.* 1. *Czermak on the Practical Uses of the Laryngoscope.* 2. *Dusch on Thrombosis of the Cerebral Sinuses.* 3. *Schroeder Van Der Kolk on Atrophy of the Brain.* 4. *Radicke on the Application of Statistics to Medical Enquiries.* 5. *Esmarch on the Uses of Cold in Surgical Practice.* New Sydenham Society. Vol. XI. London: 1861.

II. *Introduction to the Art of Laryngoscopy; a New Method of Diagnosing Diseases of the Throat and Larynx.* By James Yearsley, L.R.C.P., Edin., M.R.C.S., Eng. London: 1862.

The contents of the volume of *Selected Monographs* are sufficiently indicated by its title page, and, coming out, as it does, under the imprimatur of the New Sydenham Society, it claims, and shall receive at our hands, an attentive perusal. We shall notice the essays in the order in which they stand, and first of Professor Czermak's "On the Laryngoscope, and its employment in Medicine and Physiology."

In the preface to the English edition, the author says:—

"The following pages are, as near as possible, a literal translation, by Dr. G. D. Gibb, of the French edition of my German brochure, translated by Dr. L. Mandl, of Paris. I have enlarged the present work by the addition of an appendix on Rhinoscopy, together with some notes and sketches." His object he states will be accomplished "when the laryngoscope is brought into daily use, like the ophthalmoscope, the speculum vaginæ, the stethoscope, and other instruments; when everywhere, even a few physicians shall be found, who understand the management of this simple instrument in a dexterous and successful manner; and when others, as has, in some measure, already been done, roused by my efforts, shall try to apply the principle of Liston and Garcia in all the most varied directions of which it is capable."

Chapter I. is taken up with the history of the laryngoscope, and, in connexion with this we shall notice Dr. Yearsley's pamphlet of 15 pages.

It would appear that Dr. Türck of Vienna, in the first instance, made some fruitless experiments, and then *lent* his instruments to our essayist, who tried his hand with long continued application and complete success; the usual result ensued—a squabble about the right of *invention*—in this matter, and the profession are favoured

with the correspondence on this subject. We have read these letters, as also the "Bibliography," or list of laryngoscopic literature, at the close of the chapter; and as between Drs. Türck and Czermak we do not hesitate to endorse a quotation given in the preface to the German edition of this essay:—"That we do not consider him as the inventor, in the real and beautiful sense of the word, who first conceives and partially carries out an idea, and then lays it aside, without even a presentiment of its importance; but him, on the contrary, who first discovers the practical application of the idea, even when it has originated elsewhere, and helps towards its public recognition."

Now, as to Dr. Yearsley's pamphlet, we do not see what occasion there is for it. It professes to be "An Introduction to the Art of Laryngoscopy, &c.," by J. Y., whereas it really is no such thing. It has not a particle of originality—of originality even in the most lax sense of the term; and, appearing as it does so soon after Czermak's publication, this is an inexcusable defect. To be brief, it commences thus:—

"Several of my medical friends, who remember the perseverance, industry, and great ingenuity of my relative, the late Mr. Avery, surgeon to the Charing Cross Hospital, are of opinion, that it is due to his memory to substantiate his claims to priority in the invention of the instrument now termed the laryngoscope."

The history of the invention which, we have seen, Dr. Türck attempted to apply, and has since been worked out by Professor Czermak, is stated by Dr. Yearsley, as follows:—

"In 1840 Liston makes a suggestion often and often acted on before.

"In 1846 Avery invents an instrument, specially devoted to the exploration of the larynx, and uses a lamp (also his own invention) specially intended to light up the laryngeal mirror, when in use.

"In 1855 Garcia relates that he has adopted a similar apparatus for the same objects."

If a man contrives an instrument, as Avery did, and does not inform his profession of his contrivance, as Avery did not, we do not think he can be fairly set down as an inventor in preference to one who, at a later period, in ignorance of the earlier designer's very existence, as in this case, adopted an analogous idea of another, and worked it fairly out. Thus did Czermak, and he also

published to the world the results of his discovery. James Watt generally gets the credit of inventing the steam engine, but what if a recent suggestion in *Notes and Queries*, that one of the Pharaohs sailed a steam boat on the Red Sea, prove to be a historical fact? Pharaoh may have known or invented the steam engine; Watt also knew and invented it, and he published his invention and worked it out before the world. Shall Pharaoh take the laurel from Watt? Certainly not.

Dr. Yearsley says (p. 8):—"The term laryngoscope in lieu of throat speculum, came into vogue after the invention of the ophthalmoscope. In like manner when Avery's catheter comes into use, for viewing a stone in the bladder, I presume it will be called a vesicoscope." For the honour of a learned profession we should hope not; the first two words are Greek compounds, the third, as proposed, is a very unclassical mixture of Latin and Greek. The remainder of Dr. Yearsley's pamphlet is simply a notice of Czermak's laryngoscope; of what Czermak has done with it; and his (Dr. Y.'s) opinion that it is an admirable instrument in hands so experienced as his own. He "endorses" Czermak's treatise, but does not give particulars of any cases treated by himself. He says, "my own personal experience of its use will be given at no very distant period." We leave the reader to judge how far such a title as "Introduction to the Art of Laryngoscopy; A new Method of Diagnosing Diseases of the Throat and Larynx. By James Yearsley, &c.," is justified by the contents of the pamphlet. At best it reads equivocally, and may be fairly taken to mean, that the "new method," is an invention neither of Avery nor of Czermak, but of Yearsley. In fact it is one word for Avery, two for Czermak, and three for Dr. Yearsley himself.

In Chapter II. Czermak describes "the mode of examination of Liston and Garcia," and gives this quotation from the latter:—

"The method which I have adopted is very simple; it consists in placing a little mirror, fixed on a long handle, and suitably bent, in the throat of the person experimented on, against the soft palate and uvula. The party ought to turn himself towards the sun, so that the luminous rays falling on the little mirror may be reflected on the larynx. If the observer experiments on himself, he ought, by means of a second mirror, to receive the rays of the sun, and direct them on the mirror which is placed against the uvula."

In Chap. III., sec. i., he describes his laryngeal mirror; and in

sec. ii. he gives his reasons for preferring artificial light—by means of a lamp of his own invention—to the sunlight recommended by Garcia. In a lecture, recently delivered by M. Lindwurm before the Medical Society of Munich, the opinion is advocated that sunlight is superior to artificial light, especially in operations where such an apparatus as that of Czermak would be very inconvenient. The fact is, there is much to be said on both sides; but in our opinion Czermak's view is the more practical, and certainly the more scientific of the two.

In sec. iii. he treats of "autolaryngoscopy," any description of which we must not attempt. The reader should refer to the excellent plates and clear directions given in sec. iii., to form a fair idea of the essayist's wonderful ingenuity, and intense application. At the same time we must remark, that it is the least practical part of the treatise; for few throats have the schooled pliability and endurance of Czermak's; and the object of the invention is not so much that a medical man should experiment on himself as that he should exercise his art for the good of the suffering public.

Chap. III., sec. iv.—*Of the examination made upon others*—

"The observer is seated in front of the person to be examined; he places in his mouth the handle which supports the illuminating mirror, and looks through the central opening; the laryngeal mirror, introduced into the back part of the mouth with the right hand, is illuminated by the light which is projected from the illuminating mirror; the left hand can be placed upon the shoulder of the person examined, and steadies the chin and nape, or in holding a tongue depressor which, we can often trust to the patient himself. In the first place the illumination of the back part of the mouth and the mutual position are regulated; then the laryngoscope is heated, and its temperature regulated by the touch. After these preliminaries are gone through, we request the patient to open the mouth wide, and alternately to inspire deeply, and to pronounce the sound *ah;* during this, we endeavour to place the back of the laryngoscope against the uvula and the velum palati, to sustain these parts a little, and to give to the mirror a convenient inclination; at times it is impossible to avoid touching the posterior wall of the pharynx—the examination is directed by the image we thus obtain."

To this Dr. Yearsley adds:—"Since the publication of the foregoing directions, Dr Czermak, at the suggestion of Dr. Stoerk, of Vienna, is in the habit of holding the tip of the tongue in many cases, instead of using the tongue depressor."

Sec. v. treats of Rhinoscopy; and, with the Appendix, which should be read with sec. v., is a valuable brochure on the application of the principle of the laryngoscope to the inspection of the pharyngo-nasal vault, and of the posterior orifices of the nasal fossæ. Czermak gives a number of cases treated by him on his rhinoscopic method.

Sec. vi. of chap. III. is of the local treatment of the larynx, and consists of only a few paragraphs. However, in a paper in the *Medical Times and Gazette*, for May 6th, 1862, he enters more at length into this most important part of the subject.

Chap. IV. consists of "physiological observations" concerning "the internal arrangement of the larynx during respiration;" and "the mechanism of closure of the larynx;" and chap. V., entitled "pathological observations," gives an account of twenty cases treated by him.

From the English medical journals we learn that Dr. Czermak has recently visited London, and exhibited the principle and practice of his instrument at the various hospitals, besides adding numerous cases to those above referred to.

If professional ability, untiring application, and unquestionable genius, can recommend any man to the favourable opinion of his brethren, we are sure they must do so in the instance of Professor Czermak, who has shown the modesty of true genius in the manner in which he has committed his essay to the public. There is, perhaps, a little overwordiness in its style; but this is one of the nationalities of "the children of the mist."

Dr. Gibb has done the work of a translator with much credit, and has presented to the English reader a very readable monograph.

The next monograph is that "*On Thrombosis of the Cerebral Sinuses;*" the author thus remarks:—

"A slight glance at the history of the formation of coagula in the veins shows that it is closely connected with that of phlebitis; and various views have prevailed in reference to their origin. The clots having at first (Hunter) been regarded as an exudation upon the inner surface of inflamed veins, it was afterwards ascertained that they are true coagulations of blood, and the notion that coagulation of the blood in the veins is the immediate consequence of phlebitis, which was supported by the authority of Cruvelhier, prevailed generally. It was reserved for Virchow, in his classical work on thrombosis, to clear up the matter, and to show that in a large number of cases the coagulation of

the blood in the veins precedes the inflammation in them; while primary phlebitis, with subsequent coagulation of the blood, much more rarely occurs."

The essayist then proceeds to discuss the circumstances which chiefly cause coagulation of the blood, and the localities in the body which principally favour its retardation, and consequently its coagulation during life; he treats of the diseases which, causing a diminution of the mass of the blood generally, must have a similar effect, and observes—"It frequently happens that several of these circumstances coincide and support each others influence, and among these I would specially allude to profuse fluid discharges, which cause simultaneously a diminution of the mass of the blood, a thickening of the same, and a decrease in the power of the heart."

The essayist now enters particularly into his subject, and considers it in three sections, headed as follows:—

I. Thrombosis of the sinuses from inflammatory processes in the neighbourhood of them.

II. Thrombosis of the sinuses in consequence of a diminution of calibre from intrusion of foreign bodies and from compression.

III. Thrombosis of the sinuses from debilitating influences.

He gives 57 cases, and divides their "causation" thus:—"In 32 the thrombosis was the result of gangrenous, erysipelatous, and suppurative inflammations of those parts of the body whose vessels are in close connexion with the sinuses;" in four from the cause discussed in sec. ii.; in 15 from the cause referred to in sec. iii. "Lastly, in six cases nothing positive as to the cause could be ascertained from the history." The detailed cases occupy a large part of the essay, and towards the close the writer "sums up" the judicial findings or logical conclusions arrived at in a very scholar-like manner, and one which we commend heartily to the profession. This feature redeems the style of the essay from diffusiveness, a very common fault with medical writers. There can be, in our opinion, no question as to the professional value of the treatise—a value which we will not mar by quoting cases, or by giving extracts from a chain of reasoning which is neither superficial nor obscure. The most practical and useful part is sec. iii.; in it are included many of the most commonly-occurring ills of the flesh, and with regard to this section—and indeed to all the rest of the essay—the professional learning and full reading evinced by the writer cannot be too highly appreciated.

The third paper is entitled "*A case of Atrophy of the left hemisphere of the Brain, with coexistent Atrophy of the right side of the body.*" Since this has appeared, its learned author has departed this life, leaving to the profession, of which he was an eminent member, many published proofs of his ability and learning.

The essay before us is decidedly superior in style to the two preceding; its sentences are better written and much more intelligible; and even the descriptions of the most difficult parts of the subject are clothed in elegant phraseology, of which much is doubtless due to the practical pen of the translator, Dr. William D. Moore.

Some years ago, Professor Schroeder Van Der Kolk, received for dissection, the body of an idiotic girl. He opened the skull carefully, and discovered an astonishing amount of atrophy of the left central hemisphere, combined with abnormal thickening of the bones of the skull at the atrophied side. He describes, minutely, the comparative states of both cerebral hemispheres, and then states that "in the cerebellum, on the contrary, the atrophy was on the opposite side, the right hemisphere being in all its measurements less than the left." And, again—"below the decussation, the atrophy of the left hemisphere has transferred itself to the right side of the spinal cord, as well as of the cerebellum; the atrophy of the right side of the cord was very evident at the level of from the fifth to the seventh cervical vertebra." In order to spare the skeleton, which proved useful afterwards, the spinal canal was not further opened, but the essayist found the roots of the fifth, sixth, and seventh cervical nerves on the right side reduced in thickness and size, particularly in the fifth and sixth, and the ganglia on a level with the brachial plexus; and is not aware that any previous author has directed attention "to this difference in thickness of the spinal cord and plexuses on the side opposite to the cerebral atrophy."

After referring to the difference found between the two sides of the skull, he enters minutely on the unilateral atrophy of the rest of the body, mentioning particularly the superior extremity on the right side, the atrophy diminishing from above downwards and being least marked in the leg and foot. The essayist also investigates recorded cases of a similar or analogous kind, in most of which the examination was only partial, in some extending no further than the brain; and he shows that atrophy of the corpora striata and thalami "is the most frequent attendant on wasting of the cerebrum." He does not regard this morbid condition as a

congenital defect, but considers it to result from cerebral inflammation occurring before or after death.

Respecting the symptoms produced by this unilateral atrophy of the brain, he observes:—

"They manifest themselves partly in the more or less defective exercise of the mental powers, and partly extend their influence, as I have shown at length in the above case, over the rest of the body. That in atrophy of one-half of the cerebrum the psychical powers should be blunted or paralyzed, might perhaps be assumed as generally true (and in fact such atrophy is most usually met with in idiots); still it is far from being universally the case, for although in some instances mention is made of rather blunted mental powers, examples also occur where with atrophy of one hemisphere, the intellectual faculties appeared to be in their normal condition."

He quotes some examples of undiminished intellectual power with one half of the brain atrophied, and affirms that this condition can only exist—and may be reasonably expected to exist—where one hemisphere of the brain is healthy. Just as with one sound eye a person may see very sharply, though the other be lost. "But where the gray matter is injured in both hemispheres, particularly anteriorly, disturbance of the intellectual faculties will be inevitable." We cannot quote any further from this essay, but we recommend for perusal, especially, the writer's remarks on the ganglia in the sensitive nerves, and his curious investigations respecting the osseous and muscular degeneration caused by the nervous atrophy; also the table of measurements of these parts.

Although the learned essayist rejects the idea of Cazauvielh—the congenital defect theory—yet it is curious that the very case on which he has founded his most able paper, should, judging from its details, bear a very strong resemblance, to say the least of it, to a case of congenital defect. Besides the table of measurements already referred to, there are four very clear plates; but, in order to understand them, the reader should correct two mistakes on p. 135, as follows:—For Fig. iii., in the text, read Fig. iv.; and for Fig. iv., read Fig. iii. Much confusion and waste of time will be saved by these emendations.

The fourth paper is a very lengthy one "*On the Importance and Value of Arithmetic Means*," by Professor Radicke, of Bonn. Our profession has ever been open to the sneer of mathematicians, that medicine is not an "exact science;" and we must, in part,

admit the truth of this assertion; for not only do different observers deduce conflicting conclusions from the same facts, but radically different statistical accounts of the same occurrences are occasionally presented to the public by physicians of equal judgment and ability. Professor Radicke says—

"It is due to my friend Dr. Boecker to state, that the present paper has been undertaken at his instance. Dr. Boecker has on several occasions submitted to me recent papers of a pharmacological nature, with the view of obtaining from me a confirmation of his opinion, that great want of caution is frequently exhibited in drawing inferences from observations; and he at length has requested me to assist him in stemming the stream of baseless, and, to a great extent, erroneous doctrines which daily threaten to overwhelm medical science. With this object in view, I propose, as one who is acquainted with mathematics and physics, to whose province the treatment of questions of this kind belongs, to provide medical men with a ready test by which they may themselves try the accuracy of the conclusions at which they may arrive. I cannot, however, promise to give them an absolutely unvarying and accurate test, since, for the cases contemplated in this paper, such a test does not, and probably never can, exist. All that I can offer is the test which I myself consider a sufficient one in investigations of this kind, and on which my requirements will be based."

Here we see that the author does not aim at the attainment of "exact science;" for he does not, with reference to his subject, believe that possible. He only aims at approximation to it, and the nature of that approximation he dilates on in a very elaborate paper; and although he may call his method "a ready test," and, in the conclusion, express his belief that he has exposed, "in a way that will be intelligible to medical readers who are not proficient in mathematics, the principles upon which conclusions should alone be deduced from any given series of observations," yet, we think the very class for whom he has intended his paper will utterly fail to appreciate its worth; for the fact is, that, except to one who is to some small extent a "proficient in mathematics," his reasoning and symbols will be alike unintelligible.

The last essay—"*On the use of Cold in Surgery*"—is one of the most important, if not altogether *the* most important, in the volume under consideration. It is not even so limited in extent as its title would indicate; for it touches on most common cases in medicine as well as in surgery; and while the author expects

opposition to his views, he states them with the confidence of one who believes what he writes, because he has tried his principles with success.

He gives a short history of the use of cold as a medical or surgical agent from Hippocrates to Larrey and Guthrie; and having stated that it was always a favourite remedy with military surgeons, in opposition to the generally received opinion of their civilian brethren, he says—"according to my own experience, I believe cold to be the most important and most powerful antiphlogistic remedy." As to the causes of professional opposition to its use, he observes—"I feel justified in stating, that most of the opponents of cold are adverse to it only because they have never used it, or have never seen it used in a pure and judicious manner." And he remarks, that the general way in which "cold compresses" are used would serve to justify this statement. The essayist discusses the respective advantages of wet and dry cold applications, and inclines, in most cases, to the latter, in the shape of ice enclosed in India-rubber sponge bags of *American* manufacture.

In cases where wet cold may be considered necessary, he places the greatest importance on the temperature of the water, and shows, that where water at 45° Fahr. may cause gangrene, water at 77° or 94° will act antiphlogistically with much advantage. He gives plates of a bag, fashioned by himself, to contain a freezing mixture. In this the principle is merely to tie the neck of the bag tightly round a wooden stopper, instead of closing it with drawing strings. He also gives diagrams of vessels moulded to fit the spine and the extremities.

When remarking on the difficulty in determining how long we ought to proceed with the application of cold in a particular case, he observes :—" But it is certain that the use of cold is not indicated in the first stages exclusively of acute inflammation. The setting in of suppuration is by no means a reason for discontinuing the abstraction of heat, nor is even the occurrence of gangrene, if it be caused by the severity of the inflammation. These processes, on the contrary, run generally a much more favourable course under cooling treatment than under the so much bepraised use of cataplasms. Generally we may be guided by the feelings of the patient." Professor Esmarch has also used cold with great advantage in chronic inflammations.

After recounting what he has seen in his visits to the civil and military hospitals in Paris, he concludes his paper with an account

of twenty cases in which cold was used on his principles. Several of these were bad fractures and diseases of the joints: some, of injuries to the eye, for which he has devised a mode of applying cold by a bag of his own invention; a case of cynanche tonsillaris and several of acute rheumatism wind up this interesting essay.

Are we called to give an opinion of it? What shall we say then? Here we have an advocate for cold water, elsewhere one for hot water, a third for the Turkish bath. Dr. Esmarch thinks inflammation is a fire; and of course what better method of putting out a fire than pouring cold water on it? For putting out a fire, doubtless, cold is better than hot water, although the latter will do the work also. But what if inflammation be not a fire, not an exaltation of the vital forces, but a disease of nutrition, a depression of the powers of life? Dr. Hughes Bennett adheres to this latter view, and so did Dr. Todd, when he helped the exaltation of the vital forces with brandy. However, Professor Esmarch, unlike those who puff the Turkish bath as a cure for all mortality, thinks the use of cold should be tempered by discretion, experience, and the thermometer; and we fully agree with him, that the feelings of the patient may, in general, be a safe guide to the perhaps too ardent surgeon.

Our view may be best expressed in the words of the satirist:—

> "Est modus in rebus, sunt certi denique fines,
> Quos ultra citraque nequit consistere rectum."

On the growth of the Recruit and Young Soldier, with a view to a judicious selection of "Growing Lads" for the Army, and a regulated system of training for Recruits By William Aitken, M.D., Prof. of Pathology in the Army Medical School, &c. London: Griffin & Co. 1862. Fcap. 8vo, pp. 72.

We are always glad to welcome any addition, however small, to our military medical literature. This field of scientific knowledge is an important and extensive one, and the labourers in it are but few.

The little book before us on the Growth of the Recruit, is in the form of an introductory lecture delivered by Dr. Aitken, Professor of Pathology in the Army Medical School at Fort Pitt, at the commencement of the session in April last; but before entering

on a consideration of the work itself, it will not be out of place to give some account, founded on personal observation, of the institution in which the author holds a prominent and important position —an institution in which the public career of those entering the service of the Queen is commenced, where they are initiated into the duties they will be hereafter called upon to perform, and taught the outline, at least, of those important subjects, the pursuit or neglect of which will make or mar their efficiency.

It is not too much to say that, before the establishment of the Army Medical School, the young surgeon entering the army was almost wholly ignorant of the duties he had to perform beyond those of professional practice, and was often placed at once in positions of considerable trust and responsibility with nothing to guide him but an effete and meagre code of regulations and his own genius. Having received no special instruction beyond a few weeks' superficial training in the wards of Fort Pitt Hospital, however well he might have studied, and however deeply he might have been versed in the theory and practice of medicine and surgery, he knew nothing of the specialities requisite to make an efficient army surgeon.

The Crimean war showed clearly how necessary it was that the young officer entering the service should receive a special education in addition to the purely professional one taught in the civil schools, and led to the establishing of the Army Medical School at Fort Pitt. The courses of instruction in this school are in the following subjects:—hygiene, military surgery, military medicine, and pathology, and they occupy a period of four months, at the conclusion of which examinations are held, and the vacant appointments in the service filled up; the most desirable being given to the candidates who have evinced greatest proficiency in their studies.

Of these by far the most important is hygiene, for the great duties of a medical officer is to *prevent* disease; and an intimate acquaintance with the laws of health, and with every circumstance bearing upon the sanitary condition of the soldier, is of the greatest moment. This branch is most ably dealt with by Professor Parkes, who enters into every question bearing upon the health of the soldier at home and abroad. The water he drinks, the air he breathes, his food and clothing, his accommodation in barracks, in hospital, in the field, on shipboard, and under every circumstance and position in which he can be placed. In addition to the lectures delivered by Dr. Parkes on these subjects, almost every question

is practically worked out by the students in the laboratory under the professor's direction. Water is analyzed, and its various impurities detected; experiments are made upon the air of wards and barrack-rooms, and the students are taught practically how to estimate the condition of the atmosphere in which the soldiers under their charge exist; and this is not mere scientific amusement so to speak, for the questions examined, and minutely and carefully examined, in the lecture-rooms and laboratory of Fort Pitt are of grave importance to the health of our army.

The lectures on military surgery and medicine by Professors Longmore and Maclean, are of a very practical character, and are well calculated to prepare the young medical officer to meet the exigencies of the field, and to deal with the rapid and deadly epidemics of tropical disease. These lectures are illustrated by specimens from an extensive and well-arranged pathological museum, and from the museum presented by Mr. Tufnell, containing models and specimens of the equipments used in field service, and the various departments of military surgery.

The department of pathology is under the direction of Dr. Aitken, the author of the work before us; *post-mortem* examinations are conducted by him, and the morbid appearances explained. In connexion with this department there is an excellent and well-lighted room, provided with 25 of Smith and Beck's microscopes, and a systematic course of instruction in microscopy is carried on during the session.

Doubtless it was from Dr. Aitken's observations in the mortuary of Fort Pitt, where too many fatal proofs of the folly of early enlistment, bad ventilation, and injudicious training are to be seen, that he was impressed with the importance of showing, upon sound and scientific principles, the error of admitting *boys*, and not men, into the ranks of the army, and the necessity of attending to the due concurrence of *age*, *weight*, and *stature* in the selection of recruits, and the danger of urging on too rapidly the training of young lads, showing, from the condition of the skeleton at different ages, that they are unable to bear the usual system, the importance of which is clearly shown by the invaliding returns of the army, and still more sadly and painfully by the young victims of disease who die in, or are discharged from, Fort Pitt Hospital annually.

We will quote but one paragraph from this work:—

"As the twig is bent, so the branch will grow. I have shown you that till the twentieth year of life the ribs behind are still unfinished,

soft at their joint ends, where resistance and motion occur, and where they are still growing. The breast-bone in front is in a similar condition. It is obvious, therefore, that continued pressure upon these parts from before and from behind must exercise a material influence in fixing the future form of the chest. The cartilages of the ribs in front and the breast-bone ought to have full freedom to rise upwards and advance forwards at every inspiration, for thus the diameter of the chest, from before and behind, is naturally increased at every act of breathing. Any pressure on the chest, therefore, exerted between the front aspect and the back, when the bones are still growing, must *tend to set* the further growth of the bones in an unnatural direction; for, in order to maintain the vital capacity of the lungs, the capacity of the chest cavity from side to side must come to be increased, at the expense of the capacity in the other and normal direction. The capacity of the lungs goes on increasing with age, and height, and growth, so that men from five feet to six feet high inspire from 174 to 262 cubic inches in a progressively ascending scale. The growth of the heart also goes on relatively to the growth of the body."

Now what is the fact? When the recruit joins and has "passed the doctor," he is handed over to the drill-serjeant; in a few months a pack is put on his back, and he goes through precisely the same work as the matured and hardened soldier; if he has a strong constitution, and does not live too intemperately, he weathers the storm, and in the end becomes a soldier; but if he has a taint of delicacy, if scrofula be lurking in his system, it is sure to be developed. Drink, night exposure, drill with a heavy load, bad ventilation, perhaps venereal, and a course of mercury, settle the question, and he dies, or is discharged a burden to himself, to his friends, and the country, before he has reached the second year of his service.

Dr. Aitken proposes, with great justice, that there should be a period of probation for the recruit, during which he should undergo a judicious and well-regulated course of training, which would not tax his powers at too early a period, and, at the same time, would determine the question as to whether he was ever likely to prove an efficient soldier.

1. *Medical Education. A Discourse delivered at the Meath Hospital.* By William Stokes, M.D., F.R.S., Regius Professor of Physic in the University of Dublin. Dublin: Hodges and Smith. 1861. Pamphlet.

2. *General and Medical Education. The Introductory Lecture delivered at the Queen's College, Birmingham, October, 1st*, 1861. By John Clay, Senior Professor of Midwifery, &c. London: Churchill. Pamphlet.

3. *The Royal College of Physicians and Surgeons under the Medical Act. The Introductory Lecture at Surgeons' Hall, Session* 1861-62. By J. Struthers, M.D., &c. Edinburgh: Maclachlan and Stewart. 1861. Pamphlet.

4. *Graduation Address to the Gentlemen who obtained the Degree of M.D. in the University of Edinburgh, 1st August*, 1862. Delivered by Professor Laycock, Promoter. Edinburgh Medical Journal, September, 1862.

5. *Medical Jurisprudence.* By A. S. Taylor, M.D., F.R.S., Professor of Medical Jurisprudence and Chemistry in Guy's Hospital, &c. Seventh Edition. London: Churchill. 1861. Fcap. 8vo. pp. 947.

6. *A Manual of the Practice of Medicine.* By George Hilaro Barlow, M.A., M.D., Senior Physician to Guy's Hospital, &c. Second Edition. London: Churchill. 1861. Fcap. 8vo, pp. 738

7. *Physiology and its Aids to the Study and Treatment of Disease.* By Ed. D. Mapother, M.D., Fellow and Demonstrator of Anatomy, Royal College of Surgeons in Ireland, Surgeon to St. Vincent's Hospital. 130 Illustrations, Examination Papers, and a Glossary of Medical Terms. Dublin: Fannin and Co. 1862. Fcap. 8vo, pp. 406.

8. *Heads of Lectures on the Practice of Medicine, for the use of Students.* Part I. *General Diseases.* By And. Anderson, M.D., Lecturer on the Practice of Medicine in Anderson's University, Glasgow. London: Churchill. 1861. Pamphlet.

9. *Syllabus of the Lectures on the Causes of Fever. Delivered during the Session of* 1860-61; *with an Etiological Nosology.* By Thomas Laycock, M.D., Prof. Pract. of Med. in the University of Edinburgh.

10. *An Etiological Nosology of the Diseases of the Skin.* By Thos. Laycock, M.D. *Ut Supra.*

We have here several works, bearing directly or indirectly on the education of medical students, being either dissertations on the modes of education, or aids specially prepared for assisting in the process, and we have grouped them together, as illustrating some points to which we would wish to direct attention.

Of the dissertations on the mode of conducting the education of students, that of Dr. Stokes is unquestionably the most philosophic; and as it deals more with principles than details, and takes a wide range, we will take it as our guide, in the observations we have to make. With Dr. Stokes we shall treat of the culture of students under two heads, *education* and *instruction*. By the first, we mean the training of the mind to habits of observing, thinking, and comparing, analyzing, discriminating and reasoning; and by the second, the acquirement of special information in reference to particular pursuits, as a knowledge of anatomy, surgery, and therapeutics, as a preparation for the practising of medicine These primary branches of education, notwithstanding that they imply considerations very much separated, have, unfortunately, been very generally confounded; and to medicine it is of even more importance, than to law or divinity, that the distinction should be observed, and that sufficient care should be bestowed on the training of the mind, for it is more directly progressive than either of its sisters, and deals with conditions which are ever changing, not only as to combination and result, but as to their very nature. In the words of Dr. Stokes:—

"It is not the result of a poor seed, sown on a raw and sterile soil. It is not a handicraft, governed by a fixed rule, or any set of rules, that you may learn by rote. It is not a study of fixed, but of varying conditions. It is no solitary science, but rather a complex system of knowledge of many kinds, derived from many sources: from the observations of by-gone years, and the multiplied discoveries of the present day. It is related to, and inseparable from all other branches of human knowledge, from which it largely borrows, and to which it pays back

with interest. . . . . And it is not speaking too strongly, when I declare that the student who has been induced to neglect and to despise the extra-professional study, is a betrayed man: he will find this out when it is too late; and though he may, and probably will be able to live by his profession, he will occupy but a second place in it, and be less a support than a weight and a clog upon it. Though specially instructed, he is not, therefore, an educated man; though a member of the noblest of professions, he finds himself inferior in mental culture to those who are, perhaps, beneath him in natural gifts, and he occupies, in consequence, a lower place in society. . . . . Will he be less fitted to take his place in society by having gone through an University where, putting aside his scholastic advantages, he learns to know himself in some fashion; to lose his prejudices—to profit by the examples of wise and well-ordered men, who may be even his cotemporaries—to learn to submit to discipline—to enlarge his mind by communication with educated men of various pursuits and knowledge; and to be trained to remember his Creator in the days of his youth? Will he be a worse man by all this? Will he be a worse physician by being a good scholar and logician; a worse surgeon, by having a large knowledge of mechanical science; or a worse pathologist or physiologist by being an accomplished chemist?"

This assertion, that it is the degree of mental culture the physician has received that makes his position in society, is so evident, that it almost amounts to a truism, and we are sorry to see that Dr. Laycock, carried away by the spirit of the controversy that arose between the Scotch Universities and the Medical Council as to the propriety of conferring medical degrees on those only who had previously graduated in arts, should have allowed himself to have the appearance of attacking it, instead of being satisfied with showing, that the Edinburgh University has always exacted from candidates for her medical degrees proofs of having obtained a very excellent preliminary education, and that, notwithsanding her successful opposition to the Medical Council, she has by no means lowered her standard, but we must allow him to speak for himself:—

"By a large class of educationists, it is held, without much or any inquiry, that philosophical, classical, and mathematical learning so fits a youth for medical studies and practice, that the more learned he is the better for the public; while, at the same time, his personal character is also so influenced, that he is thus transmuted into both a scholar and a gentleman. But, in truth, these notions are not well founded. It is a fact that wealth, social position, and a good general education are often

combined in the same individual; but they are by no means necessarily associated. Learning, without that finish which intercourse with the world gives, never made a gentleman, any more than wealth; its tendency is rather to make a pedant. The notion is really traditional. When universities first arose in the so-called dark ages, personal freedom and education went together; no serf or slave could be taught. Hence the phrase 'liberal education' distinguished a university education. And from a similar state of things has arisen the notion that all students for the liberal professions should start from the same level of an education in arts—that, in short, there should be a kind of academic symmetry in the education of professional men. Such, indeed, has been the traditional procedure up to a recent period in all universities. Students have generally 'gone out' of arts into the other faculties, and doubtless at one period it was a necessary plan of study. For when modern European civilization began to arise out of the ruins of the ancient social organization, the languages and dialects of the Germans, Saxons, and Northmen were incapable of expressing the principles and details of the sciences and the systems of philosophy which were transmitted from the Greeks and Romans; so that at that epoch Latin was necessarily the language of learned, scientific, and professional men. All true literature, whether of religion, science, or art, was in Latin; all laws, all academic lectures, orations, and examinations—nay, the Bible and Common Prayer Book—were in Latin. Custom maintained this use of the Latin tongue, even when the necessity for it ceased, especially amongst the ecclesiastics, who are, by the very nature of their studies, the farthest removed from science. When the Bible was first translated into English by Wycliff, it was charged against him by the ecclesiastics that he had thereby desecrated it; and when Astin, a follower of Wycliff, was publicly accused of heresy, and defended himself in English, he was ordered by the Archbishop of Canterbury to defend himself in Latin. Latin was the language of legal and state documents in England until the reign of Henry III. The Church of Rome, indeed, still uses the Latin office; and in the more ecclesiastical and conservative seats of learning there survive Latin statutes, treatises, orations, and sermons. Nay, if you, gentlemen, had been candidates for a degree in this University thirty years ago, your examination would have been conducted in Latin; and to quote Molière, who saw this weak point in academic discipline more than a century ago, your examiners might have said to each of you—'*Bené bené respondisti.*'

"Latin is, however, almost wholly discarded in this University for academic uses, for the obvious reason that it is a cumbrous, inefficient, and impractical method of conducting academic business. Nor is a critical knowledge of Greek and Latin required for the purposes of medical study, or as a part of the training of the medical practitioner.

Classical studies, if too exclusively followed, are, in fact, more hurtful than helpful in this respect, because they develop more especially those mental faculties which are busied rather with abstract ideas and the meanings of words than with things and the realities of everyday life. The physician must be a close observer and a prompt doer to fulfil his part in life well; consequently the sooner, as a student, his faculties of observation and action are developed and trained the better. Hence mere book lore has always been found to be associated with speculative habits of thought and action to the exclusion of practice. It is the first of Bacon's 'distempers of learning.'

"The best education for the physician is that which evolves the philosophical and the practical equally, so that the tendency to one shall balance the tendency to the other. Hence the philosophical study of the natural sciences on which medicine rests as a science and art is a far more effective training for the medical profession than the critical study of Latin and Greek. Other portions of the extended curriculum of the faculty of arts come under the same category. Plato and Aristotle have a high historical value; and to the physician a knowledge of them, as well as of other ancient writers, is a graceful accomplishment. But for the business of modern science, and especially of modern medicine, the philosophies of modern Europe are incalculably more valuable than those of ancient Greece. Formal logic, too, is rather for the theologian and the lawyer who have to deal with authoritative propositions and established dogmas than for the physician whose business is with the order of nature. To him far more important is the philosophy of induction and the logic of common sense. I will say nothing of the higher mathematics, for I believe none is so hardy as to assert that a knowledge of the calculus is necessary to the proper study or practice of medicine.

"Now, in all this defence of our new medical curriculum as it stands in relation to arts, I do not advocate a neglect of the subjects contained in the art curriculum, or of classical or philosophical culture. The medical student is examined in arts by appointed examiners, and I venture to say that the amount of general knowledge thus required is quite equal to that formerly demanded for the degree of master of arts in Oxford or Cambridge, or even for the bachelor of arts now; and it is strongly recommended that intending graduates in medicine should be graduates in arts. Undoubtedly Latin is the very foundation of our modern European languages in all that relates to the sciences and the arts, and to be able to read a Latin author is an essential preliminary to the study of medicine. But, then, that amount of classical knowledge being attained which will facilitate the study of English and other languages of modern Europe, why require the student to be able to make Latin and Greek verses to the neglect of these, when it is plain that, as means of scientific intercourse and development, they have at least an

equal value with the dead languages. There is perhaps no higher accomplishment for any man, nor one more generally useful, than a thorough knowledge of the English language and literature; yet it is notorious that English youth trained under this high classical system leave school and college unable to write their mother-tongue correctly. Now, the whole gist and scope of the Edinburgh curriculum is to afford the means of self-culture to the student. Your studies do not end with this day's proceedings; on the contrary, you only join a numerous band of men who are hardworking students."

The two questions here mixed together, that of preliminary education and graduation in arts as a necessary condition for graduation in medicine, have no real connexion, nor can Dr. Laycock's remarks on classical studies be taken as a fair criticism on art graduations. We do not, however, mean to enter on an examination of these matters at present, but with regard to the attempt of the Medical Council to restrict graduation in medicine to those possessed of a degree in arts, or who have undergone an equivalent examination, we have no hesitation in expressing our satisfaction that it was successfully resisted. Rigid rules and coercive measures of this description have always failed, and we regard it as of the greatest importance that the several licensing bodies should be allowed, in a great measure, to determine for themselves their standards of education, or, at least, how far they shall exceed a certain minimum; for the natural laws of supply and demand, as Dr. Stokes ably argues in the following passage, will then determine far more safely than can any resolutions or edicts of councils, the education of the higher grades; and there can be no doubt, but that the infusion into the ranks of the profession of even a few very highly educated members will be the most effectual means of elevating the general standard.

"But our tendencies are various, and society is in need of servants of various kinds; some to do the higher or more intellectual, some the lower or mechanical work. Let those who aspire to the foremost rank remember that, to a great degree, the branches of knowledge, which, as means to an end, they must cultivate, are correlative; and that the powers of observation, experiment, induction, and the right use of the reasoning faculty, are the sources of all success in whatever special direction we seek to act. It is plain that the larger the mental culture—the better the soil which is to receive the seed of any special science, the richer will be the crop. The old adage, that a little knowledge is a dangerous thing, is not always true. In general, a little knowledge of anything is better

than no knowledge at all; but its danger or its safety depends altogether on the previous cultivation of the mind that receives it."

Instead, then, of laying down a fixed rule as to graduation, we would, if we might venture to dogmatize, recommend that in regulating the preliminary education of medical students, the following should be held in view as guiding principles:—viz.,

1st. The cultivation of the faculty of memory.
2nd. Of the faculty of reasoning.
3rd. Of that of observation.

For the cultivation of the faculty of memory, resort is generally had to the learning of languages, especially of the dead languages, and the reading of the classical authors. It is probable, however, that too much attention is paid to these subjects, to the exclusion, very frequently, of English literature both modern and classical. Lads are kept, while they are at school, over books written in languages it was never intended that they should master, and the effect is, that they enter on their professional studies with carelessness, from the habits they have acquired, and from the want of faith that has been generated in them, as to the reality of their studies. A certain amount of acquaintance with the classical languages is, no doubt, useful, but study of the English classics would be no less a training for the memory; it would not leave that impression of *unreal* on the mind of the student, and it would enable him to leave school with a large amount of information that would serve him materially in his intercourse with society.[a]

2nd. The cultivation of the faculty of reasoning. Of the necessity of this there can be no question, nor can there be, as to the mode

[a] "Cicero in his Offices," says Sydney Smith, "tells a whimsical anecdote of Cato the Censor. Somebody asked him what was the best mode of employing capital? He said to farm good pasture land. What next? To farm middling pasture land. Well, but after that, what the next? To farm bad pasture land. Now the notions which prevail in England respecting classical learning seem to me to resemble very much those which the old Roman entertained with regard to his favourite method of cultivation. Is a young man able to spare the time necessary to enable him to pass through the University? Make him a good classical scholar. But a second, instead of residing at the University, must go into business when he leaves school. Make him a tolerable classical scholar. A third has still less time to snatch up knowledge, and is destined for active employment while still a boy. Make him a bad classical scholar. If he does not become a Porson or a Heyne, he may learn to write nonsense verses. If he does not get on to Horace, he may read the first book of Cesar. If there is not time for such a degree of improvement, he may, at least, be flogged through that immemorial vestibule of learning *Quis docet*, who teacheth? *Magister docet*, the master teacheth. Would to heaven that he taught something better worth knowing."

in which it is best effected. "Reasoning as a practical habit, is taught," says Dr. Whewell in his *Principles of English University Education*, "with peculiar advantage by mathematics, because we are in that study concerned with long chains of reasoning, in which each link hangs from all the preceding; . . . and this faculty can hardly be acquired in any other way than by the study of mathematics." Again, he says, "In mathematics the student is rendered familiar with the most perfect examples of strict inference, compelled habitually to fix his attention on those conditions on which the cogency of the demonstration depends, and in the mistaken or imperfect attempts at demonstration made by himself or others, he is presented with examples of the most natural fallacies, which he sees exposed and corrected." Of the advantage, to a practitioner of medicine, of an intellectual training, such as is here described, it is unnecessary to speak, as the mere statement of its results must carry conviction.

3rd. The cultivation of the faculty of observation. This is the subject to which least attention is paid in general education, and yet its importance to the practitioner of medicine is not less than that of reasoning and memory, if it be not greater than that of either or both. Powers of correct and minute observation are very rare; facts that must have lain before our eyes from the earliest age of mankind are discovered from time to time, and, no doubt, will be discovered, which, had our powers of observation been cultivated, would have been known long before. Cultivation of these powers, then, we would urge as a paramount duty. The study of systematic botany and of natural history, afford the greatest facilities for the purpose. The arranging of plants in their several classes and orders requires a degree of attention to minute details, that affords, perhaps, the best training to the powers of observation that can be obtained.

But, it may be said the knowledge of botany and mathematics, and of such subjects, can be of no use to a practitioner, and his time and money should not be expended on them. True, acquaintance with these subjects can be of little or no use to him, but, it is the intellectual training that the study of them implies that is of use, and though the knowledge of them be forgotten, as it surely will when the mind is occupied with other subjects, the trained intellect remains.

Of so much importance is this training, and so much would it facilitate the acquisition of professional knowledge, that we would

suggest that the licensing bodies should shorten, by a considerable period, in favour of those who have obtained it, the time and course of education that they require from students who have not had such advantages.

Turning from "Education" or preliminary training to "Special Instruction," Dr. Stokes argues that it is not of the best kind because it is the opposite of self-instruction.

"It is to be doubted whether any man can be taught safely or thoroughly by another, when the matter to be taught or learned requires an independent exercise of mind. A good teacher should seek rather to point out the landmarks of the subject, dwelling more on its difficulties, and the mode of dealing with, and, it may be, lessening them, than on its ascertained facts. He should seek to show his pupil how to teach himself, rather than fatigue him by a detail of what is determined. By the latter course, so common in schools, the student's chance of mental exercise is taken from him. But he may still strive to exercise some power besides that of memory. He may be convinced of the value of self-culture; but what if he is not allowed time to practise it?

"Now, it is not overstating the case when I say, that in his attendances on triple, double, and single courses of lectures, in the dissecting room, on the hospital, and, lastly, on the grinder, every available hour of the day is consumed. Is any other profession studied, or compelled to be studied, in such a fashion? Can the mind of the student be able to work for any good after the physical and moral exhaustion caused by eight or ten hours of forced labour, on a crowd of scarcely connected subjects? It is plain that such a system is a vicious one; and, as a proof of its inutility, to say nothing of its mischief, there is the great fact that the student does not trust to it. Deprived of the opportunity of educating himself, he perforce joins the class of the crammer. He is not to be blamed for this. The fault is not with him; neither does it rest with those who so profess to teach; but it lies at the door of the originators of a system by which the medical curriculum has been so overloaded.

"Now, what is the position of the student? The authorized system of teaching is notoriously insufficient to "pass him," using the common language; but the unauthorized teacher is able to do so, and therefore the student rests upon him, not to be taught his business, but to pass his examination. The evil has gone very far, and will go further still. Even now some resort to this system from the very first year of their study, and sit to be crammed for two hours a day, to the destruction of all self-reliance, and the prevention of self-culture, for the purpose of obtaining the semblance of learning, which also is to be employed, not for its progression, to use the words of Lord Bacon, but merely for its use.

"The use of this knowledge is even lower than that indicated by Bacon, for it is simply to enable the student to deceive his examiners. . . . . .

"But it is not on the indolence of the student, or the pretensions of the crammer, that we are to charge the great evil which flows from this system. Two causes have long existed for it; and while they continue, it is hopeless to expect any change for the better.

"The first, which has just now been indicated, is the overloading of the curriculum, for no conceivable object but the benefit of those who live by teaching. The student is called on to attend every day of the session on such a multitude of lectures, given, of course, in rapid succession, as often to act in really paralyzing his brain. Double and triple courses of lectures are still demanded to be attended, and his physical and mental power gives way under such a system.

"The second is related to the first, and it is to be found in the long-existing terminal examination for the degree or licence. From the day the student begins his task, the terrors of this examination are before him; and no wonder, when he thinks that on that day of trial, when the matter at stake is his future name and fame, he will or may be called on to answer examiners who forget sometimes the difference which should exist between an examination which is competitive, and one for a licence, and seek to find out less what the candidate knows, than what he does not know—an examination in which he is, or may be, called on to answer in Anatomy—general and descriptive, Comparative Anatomy, Physiology, Medical Pathology, Pathological Anatomy, Chemistry—organic and inorganic, Botany, Vegetable Physiology, Practice of Medicine, Therapeutics, Materia Medica, Surgery, Surgical Anatomy, Surgical Pathology, Midwifery, Toxicology, and Medical Jurisprudence.

"It is not that an idea exists of the inutility of any one of these subjects; but the evil is in compelling a candidate to answer in so many in a limited space of time. It is a system the evils of which have increased, in place of diminishing. An error on the part of those who have made such laws, is naturally met by deceit in those who have to submit to them. . . . . .

"In what other profession are the aspirants so misused? It was not in this fashion that the fathers of British medicine were moulded, nor our great jurists, or our learned and pious theologians were trained. Will not its result be, at the best, to produce a crowd of mediocrities, and with no chance, or but a little one, of the development of the larger man? For by this machinery of special education we so stunt and shackle the student's mind, that when at last he is set free, his nobler powers are dwarfed, and his fitness for a high social place is greatly damaged.

"These things cannot go on. Society is becoming too enlightened to bear with such a system, and we may hope that its days are numbered.

Indeed, in the recommendation of the Council to separate the professional examination into two parts, one of which is to take place at the termination of the second year of study, we may see the coming of that wholesome change, which will make the mode of examinations in medicine similar to that used in the courses of arts in the old Universities. The student would thus be relieved from the necessity of being prepared to answer at one occasion in a multitude of subjects. He could advance step by step, without hurry or forcing. The examinations would be educational. Rejection at any one of them would not damage his future position; and this circumstance would leave the examiners more free to act in their decisions; and the literature of the profession, now so much neglected, could be more easily made a part of the course of education. . . . .

"Looking to the extra-professional education and the self-culture of the student, it is plain that in his purely medical curriculum he should be relieved from much that is coercive; and the question arises what portions of it appear proper to be enforced? I have long believed, that if compulsory attendance is to be insisted on, it should be only on such courses in which the teaching is demonstrative. I believe that great good would follow from such a system, and that a higher class of man would be thus produced in our schools. Let the student be only compelled to attend such courses as those of descriptive and practical anatomy, descriptive and practical chemistry, clinical medicine, and operative surgery, all of them subjects which he cannot reach or study in his closet; but let him be emancipated from coercive attendance on systematic lectures. What appears desirable is, not that we should abolish chairs in materia medica, botany, and other branches—we should rather preserve and endow them so that first-class men would seek to fill them; but let it be a matter of option to the student to attend the courses belonging to them; and if the chairs are worthily held, their occupants will not want for pupils.

"There is another abuse or evil which hangs on those now indicated,—I mean the certificate system. We cannot invent a law which will make men honest, but it is quite possible to make such laws as will lessen the temptation to be dishonest. If the number of required attendances be diminished, so will the number of certificates of attendance sought for and granted be lessened, and a great evil be reduced, if not removed. It is admitted that in this matter great laxity has prevailed here and elsewhere, partly arising from interested motives on the part of the granter of the document,—partly from indolence and want of method in the schools,—often from a mistaken good-nature, making the teacher slow to stop the progress of the student, who, though inattentive, may be otherwise estimable, and partly from want of truth in the applicants themselves; the result of the whole being the issuing and the using of a document too often untrue, a certificate purchased, not earned.

"Now, consider the effect of this on many young men, of whom it may be said that they enter the portals of an honourable profession by being guilty of falsehood, or the subornation of falsehood. Is this a fitting commencement of a professional life, in which honour is so indispensable and so precious, that he who wants it, or he who has soiled it, has no business there. It is important in relation to this subject, to observe, that the reports of the General Medical Council show, that a large portion of the cases adjudicated upon by them, relating to persons guilty of conduct infamous in a professional point of view, had reference to the cowardly vice of falsehood, in reference to the documentary evidence of age, to the obtaining of diplomas, to the dates of diplomas, and, lastly, to the question of identity."

The overburdening of students with lectures has attained to such a height, that of late a more or less general reaction is taking place. A writer in the *Quarterly Review*, generally believed to be Sir Benjamin Brodie, has condemned the system, and Mr. Lawrence and Mr. Ferguson have more recently expressed themselves as warmly opposed to it, and already some of the colleges have commenced to retrace their steps, and to lower their curricula. The *Quarterly Review* would, however, have them go further, and do away with their curricula altogether. "It has," it says, "been observed, we believe by Sir Walter Scott, that no one can be said to be well educated who has not been, to a certain extent, self-educated, and all our experience would lead us to regard this maxim as especially applicable to the education of medical students. It is the duty of the governing body to prescribe for them a general plan of study, but, as to the details, we are much mistaken if they will not manage them better for themselves than they can be managed for them."

We have here two remedies proposed—Dr. Stokes recommends that *if* compulsory attendance is to be insisted on, it should only be on such courses in which teaching is demonstrative; and Sir B. Brodie recommends that it shall not be insisted on at all. Before giving in our adhesion to either it will be well to ask—do lectures constitute the best means for educating medical students? In answering this question we have to consider what it is that students in medicine have to learn, and the mode in which information is conveyed in lectures. A little consideration will show that in the first instance the business of a medical student is to store up in his memory a series of facts, the bearing and mutual relations of which he cannot, most frequently, see or comprehend. Thus, the study

of anatomy closely resembles the study of a language, it requires simply an exercise of memory; and as, after a little study, the structure and derivation of words assist the student's memory, so in anatomy the relations and uses of the several parts assist the memory too; but, in the first instance, the faculties of observation and memory are the only ones called into exercise. The same holds true of the other subjects that have to be learned, of materia medica, of chemistry in some degree, and even of practical medicine and surgery. Now who would think of teaching a language to a novice by lecturing on it; reading, for instance, to a class of pupils several pages of a dictionary, and expecting them to learn by so doing. The fact is, in studies requiring the exercise of observation and memory only, teachers can give no assistance beyond pointing out the facts to be observed, and keeping the attention fixed on them. It is by repeated observations that the facts are fixed in the memory. In this the student must minister unto himself.

When the student's education is more advanced, the faculty of reasoning is called on. The facts having been acquired and stored up, it now becomes necessary to estimate their value, to compare them together, and to weigh them one against the other. To consider the generalizations that have been formed, and the inferences that have been arrived at.

Thus, then, we require two different modes of teaching, and two different classes of teachers, tutors, or demonstrators, and lecturers. "There are two modes of teaching" says Dr. Whewell, "which in a general view may be broadly distinguished from each other. In the one the lecturer expounds to his audience the doctrines or results of some branch of knowledge, the speculations of antecedent philosophers, or his own, while the office of his audience is but to attend to him, to listen, to receive, think on, and treasure up what the speaker delivers, without being called on to take any active part; without being required to produce, to test, or to apply the knowledge thus acquired. In another mode of teaching the learner has not merely to listen, but to do something himself, not merely to receive, but to produce his knowledge. . . . . The former I call speculative, the latter practical teaching."

Of these two modes of teaching the colleges have provided amply for the "speculative," but for the "practical" they have made no provision, yet it has grown up independently of the colleges, and indeed, even contrary to their wishes, and in opposition to their rules, notwithstanding which, it is now the most extensively used

system, and is rapidly superseding lecturing. Its growth and success, under the adverse circumstances it has had to encounter, show that it is the result of some deep seated want which the other failed to satisfy.

In Dublin, where this system is more extensively practised than elsewhere, it is known as "grinding;" an unfortunate term, for it is thereby confounded with the "grinding" more prevalent in some other schools than in Dublin, which is a "cramming" process that proceeds on the plan of ascertaining the questions an examiner is in the habit of asking, and providing the student with answers for them. The true "practical" system, or the "tutorial," as it is begining to be called, is quite the reverse of the "cramming" process. In it a certain subject is prescribed to the students, which they are expected to study, the teacher then meets them and examines and cross examines them in reference to it, correcting their misconceptions, or leading the class to correct one another, testing thus the amount of study given to the subject, the clearness with which it has been apprehended, and the powers of retention of the student. Thus the idle are detected, the careless are warned, and the superficial and stupid are alike shown their deficiency. The student, moreover, is taught to express his thoughts in words, to arrange his ideas, and to have his knowledge ready for use when called on, and so is relieved of much of the "mauvaise honte" and diffidence that afflict so many when undergoing an examination.

For elementary instruction, we believe this tutorial system is the best that can be adopted. For the teaching of the more advanced classes the "speculative" mode will always hold its place. In it the facts that have been acquired are compared and weighed, "the doctrines or results of some branch of knowledge, the speculations of antecedent philosophers, or the teacher's own are expounded," and the student is taught to reason. "This higher kind of teaching," says Dr. Harvey, in his *Letters on Medical Administrative Reform*, "may not inaptly be compared to the charge which a judge delivers to a jury, after they have heard the evidence in the case which they are engaged in trying:—The jury already know the details of the case; they have heard the evidence bearing upon it, and they have formed certain conclusions in regard to it. The judge addresses them accordingly: his object is to assist them in arriving at a sound conclusion, and finding a true verdict; and, with a view to this, he merely recapitulates the leading particulars

of the case, dwelling only on those which it is specially important for them to bear in mind; and he then proceeds to sift and weigh the evidence adduced, and likewise to apply the facts as they truly appear, together with the principles or the express enactments of the law, to the questions which the jury have to decide; but he discards a minute detail of the whole case, as being what the jury are already familiar with."

These two modes of teaching have then their respective merits, and should not be placed in opposition to one another. The regulations of the colleges, however, have this effect, they ignore the existence of the tutorial teaching, except, indeed, Edinburgh University, where, under the guidance of Professor Goodsir, the tutorial system has been regularly recognized; and where, we are glad to see, from the address of Professor Laycock, it is likely to be still further developed. They require attendance on lectures only, and in so doing, interfere with and prevent the right and natural development of both systems.

Both systems suffer, but, the "speculative" mode more especially. It suffers most, because it is most interfered with, in fact, it fails in consequence of the very means that were intended to support it. To use a professional illustration, the failure of the system is like the curvature of the spine that results from the use of stays and artificial supports adopted in the anxiety to preserve a good figure.

The cause of this failure of the lecturing system will be apparent on a little examination. Students are required to attend certain courses of lectures, and to attend the same courses two or three times in succession; the result of which is, that the classes attending these lectures are composed of first, second, and third years' students. And the teacher must either make his lectures of the most elementary character to suit the junior students, or, if he addresses himself to the seniors, involve the others in discussions they cannot follow or comprehend. Most lecturers address themselves, and we believe, rightly, to the juniors of the class; the seniors, consequently, feel that the lecture is to them but a twice or thrice told tale, and they soon begin to absent themselves. Add to this, that books abound, conveying the same elementary information as the lecture, and illustrated with drawings and diagrams whose excellence and clearness cannot be surpassed; and that these books are permanent, that in studying them, if the attention wander for a moment, the train of thought is not lost as in lectures;

and the reason why students are careless as to attendance on lectures will be apparent.

But this is not all, the forcing of attendance on lectures induces men to lecture who have not studied or reflected, and thus the efficacy of lectures is still further impaired.

But granting that lectures are the best mode of conducting some parts of the professional studies of medical students, the question still arises as to whether attendance on them should be enforced—we mean by roll calls and certificates. Enforced attendance on lectures is but a clumsy contrivance; the body of the student you may have, but his attention you cannot secure; better far leave the attendance optional, but make it absolutely necessary for candidates for the licence to have thoroughly studied their subject. In this way the lecturers will be stimulated to make their lectures worthy of being attended, and while the benches of incompetent teachers will be deserted, students will know and feel that it is for their own advantage to seek information where it is best obtained.

Let licensing bodies then, test the knowledge of the candidates for their licences by frequent and repeated, and thorough and stringent examinations, and thus indicate the general plan of study they should pursue, but, as for details, leave them to manage them for themselves, when, to recur to the words of Sir Benjamin Brodie, already quoted—"We are much mistaken if they will not manage them better for themselves than they can be managed for them." Already we have, in the pages of this journal,[a] advocated this system of free teaching and frequent, or, as Dr. Stokes calls them, "educational" examinations, and we now beg to recur to our words.

"Under such a free system, no doubt much of the lecturing of the present day would have to be given up; at the same time, for many of the higher branches of knowledge, and for subjects requiring demonstrations, the efficient lecturer must be always sure of an audience. There is an influence in the living voice, and an advantage in coming face to face with the living teacher, that places the lecturer far above the competition of books; but teaching of this kind must be of a high description,—the audience must be led to examine, to reflect; the lecturer must show that he is able to lead them in this path; he must, moreover, have something to communicate, and such lecturing will command an audience. It was such lecturing that drew the crowded audiences which attended the course delivered a few months ago, in this city, by Dr. Brown-

[a] Vol. xxviii., p. 400.

Séquard, where the most senior and busy practitioners were seen vying with the student in the attention they bestowed.

"Yet even in such a course as that delivered by Brown-Séquard, a radical defect in lecturing, as a system of education, manifested itself. Notwithstanding that the audience were, for the most part, men of trained minds, who were familiar with the bearings of the subjects discussed, and that the chief theories propounded were based on experiments that were exhibited,—yet there was manifested by the conversation of the audience, after the lecture, a degree of uncertainty as to the facts actually demonstrated, and of obscurity as to the theories propounded, that showed the difficulty, in listening to a lecturer, of hearing all that is said, and of duly estimating and retaining all that is heard, and the necessity, that even trained minds are under, of turning back and retracing their steps, in proportion as the subject develops itself, opportunity for which can only be afforded by a book.

"Let us not be misapprehended. We do not mean to decry lectures as useless, but we do assert that, for many purposes, lecturing is a bad system of teaching. For the acquisition of elementary facts, where the student has chiefly to exercise his memory, and to keep his attention fixed, we believe lectures to be about the worst system that could be devised; but when the facts have been acquired, and when it is wished to teach the student to weigh them, to reason on them, and to estimate their value, we believe there is no system so efficient as good lecturing, especially where the lecturer makes use of a text-book, and follows it in his remarks."

Having thus explained the principles on which we believe the culture of medical students should be conducted, it remains for us to make a few observations on the books before us, and their relation to the preceding remarks. In this point of view they may be divided into two classes; first, we have Taylor's *Medical Jurisprudence*, and Barlow's *Practice of Medicine*, which are complete, though condensed treatises on the subjects of which they treat. They are now so well known that they require but little notice from us. The appearance of renewed editions is the best evidence of their usefulness. To teachers they would serve as valuable class books—to students and practitioners as excellent books of reference.

The remaining books are of less ambitious character; three of them are pamphlets, and constitute well arranged syllabuses of courses of systematic lectures; a professor, taking one of these as his guide, and giving a copy to each of his pupils, would, we are

sure, be enabled to lead a class of advanced students, who had already acquired the elementary facts, to weigh them, and reason on them, and to estimate their value—he might conduct them through "fresh fields and pastures new" of science and art; and the diligent and reflective student would be enabled, by the use of them, to afterwards recall most of what had been said, certainly more effectually than if he had attempted to take notes of the lecture himself, but we fear not so profitably as if they treated more fully of the subjects. Mapother's *Manual of Physiology and Disease* belongs to the same class; or, more correctly speaking, is intermediate between the syllabus and the complete treatise. The materials of which it is composed were arranged, the author tells us, as notes for the instruction of his pupils, and at their suggestion, are published in their present form—the only object attempted having been, he says, to express the leading facts of the science in as few words as possible, leaving them to be amplified or freed from any obscurity by the reflection of the reader or the expository powers of the lecturer. A work constructed on such principles supplies, in a great measure, the text-book we have been arguing for in the preceding pages; its well-executed diagrams and illustrations, and the facilities it affords, by its permanence, for reference and reperusal make it of great value. Its details are so full as to make it easy of comprehension, even to the junior student, while the senior will have his memory refreshed, and his judgment and reason exercised by the use of it. That it will serve a useful purpose among students, and meet with a ready sale, we cannot doubt.

On the Immediate Treatment of Stricture of the Urethra, by the employment of the Stricture Dilator. By BERNARD HOLT. London: John Churchill. 1861. 8vo., pp. 56.

"BURST it open and thrust in a number twelve," was the bantering answer made us some time back, by a medical friend, distinguished in his specialty, to our question as to whether he had heard of the new plan proposed for the treatment of stricture. At first we were under the impression that he had gotten some vague idea of Mr. Holt's plan, but his comical look of blank surprise, on our proceeding to show and explain to him the instrument, soon con-

vinced us that his indeed was but one of those random shots, which, by universal suffrage are admitted to be capable of putting a period to the existence of a certain gentleman in black, with a name unpronounceable in good society. Nor, indeed, was his hap-hazard answer to be wondered at, when we reflect on the various plans that have been from time to time propounded for the treatment of this wide spread, most distressing, and occasionally most intractable disease No other plan that could be called new could suggest itself to his mind, and yet great was his surprise when he found how near the truth was what he intended to be but a piece of pleasant extravaganza. Instead, however, of entering on a *critical examination* of the plan of treatment in question, it may be as well to inform such of our readers as are still in the dark what Mr. Holt's plan is, and to endeavour to describe the instrument by which he proposes to carry out his views.

The instrument employed by Mr. Holt first claims our attention. He describes it as follows:—

"The instrument by which this simple process is accomplished, consists, as is shown in the drawing, of two grooved blades fixed in a divided handle and containing between them a wire welded to their points, and on this wire a tube (which, when introduced between the blades corresponds to the natural calibre of the urethra) is quickly passed, and thus ruptures or splits the obstruction."

Mr. Holt's views are these: that we should rather prefer forcibly to overcome, with the assistance of the instrument which he recommends, the resistance offered to us by a stricture, than endeavour to enlarge its calibre by the slower process of dilatation by the employment of successively enlarging instruments; or, in extreme cases, cutting the Gordian knot by the summary process of external incision.

The advantages that he claims for this plan of treatment are, rapidity of cure, immunity from danger, freedom from hemorrhage, and infiltration of urine, &c.—all consummations most devoutly to be wished for. In a periodical such as this, it would ill become us to assume to ourselves the right of pronouncing an absolute verdict in such a case; but, were we to judge from our own experience, as also from a perusal of Mr. Holt's work,[a] we would feel inclined to accept the following propositions put forward by him as proven:—

[a] We beg to refer our readers to Mr. Macnamara's paper on this subject, at p. 297.

"1. That the operation is of the most simple kind, and that any one who can pass a bougie through a difficult stricture is competent to perform it.

"2. That it is not attended with hemorrhage, infiltration of urine, abscess, or any serious local mischief.

"3. That in the majority of instances the relief is immediate.

"4. That the occurrence of rigors, or any other constitutional disturbance, is very rare, and the patient is seldom confined to bed longer than from twelve to twenty-four hours.

"5. That the urethra is immediately made permeable by a catheter of full size, which may be ever afterwards passed at discretion.

"6. That this method is available in every kind of stricture where a canula of any size can reach the bladder.

"7. That when after-treatment is judicious and attentive, the full capacity of the passage is always maintained.

"8. That in all cases of neglected after-treatment, the stricture yields again to this method more promptly than to any other.

"9. That, it being impossible that any but the diseased tissue can be divided, the splitting of the stricture has a decided superiority over any cutting operation.

"10. And, to sum up the great advantages in one proposition, that the process is facile, speedy, prompt in its effects, and free from every danger, immediate or remote."

We must terminate these remarks on Mr. Holt's brochure, by most strongly recommending its perusal to every surgeon anxious for the advancement of his profession; and we can assure our readers that in Mr. Holt's work they will find a series of cases recorded in so truthful, and, at the same time, so unpretending a style, that they cannot fail to carry even to the most prejudiced mind conviction "that there is something in it." We confess ourselves to have been at first of the sceptical tribe, and nothing less than Mr. Holt's position and character as an accomplished surgeon, with a large field for observation in the hospital amongst the surgical staff of which he is so distinguished an ornament, would have induced us to submit his plan of treatment to the hard test of experiment; we have done so, and with an amount of success that warrants us in most strongly recommending it to the still further consideration and adoption of our surgical brethren.

Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London. (Second Series.) Vol. XXVI. London: Longman. 1861. 8vo, pp. 286.

THIS volume of the *Transactions* contains 20 papers, of which we give the following abstracts:—

I.—*A Case of Gastrotomy for Extra Uterine Gestation.* By JOHN ADAMS, F.R.C.S., Surgeon to the London Hospital.

THE patient in this case was a woman, aged 28, who had been married eight years, and had always menstruated at regular periods, but had never been pregnant before. Her pregnancy commenced early in February, 1860; from March till May she was subject to occasional attacks of severe cramp-like pains, which were confined to the right side of the abdomen, extending from the pelvis to the hypochondrium. She felt very sick, but rarely vomited; she had no distinct morning sickness at any time. In June she first felt the movements of the child, which continued till the 30th of Oct., a day or two prior to which she had a heavy fall, followed by soreness and cramps down to her knees. On 30th Oct., she received a severe mental shock from the death of her sister, and after this the movements ceased. She now began to feel sleepy, tired, and worn, and suffered from a sense of stiffness in her limbs, but had no distinct pains like uterine pains. A discharge now took place from the vagina, and blood, varying in colour from dark to pink, and pieces of flesh-like substances, entirely inoffensive in odour, were expelled in gushes. She reckoned her time of gestation to have terminated at the beginning of November, 1859, and from this time she gradually diminished in size. In Feb., 1860, menstruation recommenced, and in March the milk left her breasts, and she had become much thinner than she had been. It was now Mr. Adams first saw her, and in conjunction with Dr. Ramsbotham.

"On examination a hard oval tumour was felt, principally on the right side of the abdomen, extending from above the umbilicus to the right side of the symphysis pubis. There was a remarkable prominence in the tumour, which was quite immovable, and very unlike any swelling from a fibrous tumour connected with the uterus. The hand could be readily passed around a great part of it, and the abdominal parietes could be made to glide indistinctly over its anterior surface. There was a feeling

of irregularity about it; but I confess I could not distinctly recognize the individual portions of a fetus, for there was a good deal of subcutaneous fat in the walls of the abdomen. From my limited experience, I can hardly venture to assert that the sensation communicated to me by the examination was characteristic of this condition, but I recognized it at once as precisely similar to what I had once witnessed in a parallel case. There was no pain on pressure. The uterus was found by examination *per vaginam* to be rather higher than usual, but there was no evidence of disease in it. She was able to perform her usual domestic duties, and expressed herself very anxious for the removal of the tumour.

"There could be little or no doubt as to the precise nature of this case, and Dr. Ramsbotham and I agreed that the operation of gastrotomy should be performed; but we thought it prudent, on grounds hereafter to be stated, that this should be deferred until six months had elapsed from the end of what was supposed to be her natural gestation. She was re-admitted in May, and, being then in perfect health, and fully alive to the risk of the operation, I performed the operation on the 31st. She was readily placed under the influence of chloroform. I made an incision about five inches in length in a vertical direction over the most prominent part of the tumour, beginning a little above and on the right side of the umbilicus, and extending as far as within an inch and a-half of the pubis. The integuments were divided, and I found that my incision had fallen on the sheath of the rectus. This was opened, and the muscle exposed; the peritoneum was opened to the same extent, and the surface of the tumour came into view, presenting a glistening aspect, and only slightly adherent at this part. The cyst, which was about four lines in thickness, and very firm, was opened, and a pint of a greenish-yellow, transparent fluid escaped, with yellowish flakes of *vernix caseosa* and some hairs. As soon as the cyst was opened, a loop of the funis protruded. The cyst was divided on the finger to the extent of the opening in the abdomen, and the funis being returned, and a portion of the rectus divided transversely, I felt the head and body of a fetus, with its head uppermost, and its face towards the spine. I introduced my hand and seized an arm, which I pushed back, and then had no difficulty, owing to its limp state, in extracting the fetus by the breech. The funis was divided so as to leave about two inches outside the incision. On traction by the remaining portion of the funis, it was clearly ascertained that the placenta was firmly adherent, and, under the advice of Dr. Ramsbotham, no attempts were made to remove it. A piece of omentum, which had escaped through the opening, was cut away, and some rather large arteries as well as some vessels in the cut edges of the cyst, were secured. I carefully sponged out all the fluid from the cyst, the walls of which collapsed, especially on the left side. Firm adhesions seemed to keep the right side in contact with the abdominal walls. The edges of

the wound were carefully brought together by interrupted sutures, carried only through the integument and subjacent fat, and all the parts were kept in apposition by careful strapping, padding with cotton wool, and an elastic bandage.

"Half a drachm of laudanum was given after the operation. She became exceedingly faint, but was restored at once by brandy. It would be useless to detail her progress with any degree of minuteness from day to day. She took moderate support, and a small quantity of brandy and good sherry, and she went on uninterruptedly well. The funis, which, on its first appearance during the operation, was thick and œdematous, shrivelled up, and was altogether lost sight of on the fifth day after the operation; no doubt it escaped amongst the discharges. There remained for some time a small fistulous opening, with exuberant granulations, and a slight discharge of fetid matter at the lower part of the wound, where the funis had escaped.

"October 1st.—Since this account was written, I have seen Mrs. Jermy three times. On her first visit she looked pale and ill, her legs were slightly swollen, and her general health was evidently suffering from some obscure cause. The fistulous opening still existed, and discharged a small quantity of fetid pus. I passed a steel director at least four inches towards the back of the pelvis, and this gave her pain. Caustic was applied to the orifice. Ten days or a fortnight after this she came to see me, and her health had materially improved; and about ten days ago she appeared quite well, and told me that the discharge had almost entirely ceased."

Mr. Adams says there are several points of serious importance in connexion with this case, on which the practice pursued has a forcible bearing; these are, first, the propriety of performing any operation whatever under such circumstances; secondly, the time at which the operation should be performed, if thought desirable; and lastly, the method of performing it. Are we justified, he asks, in removing by an operation an extra uterine fetus, when nature affords us no indication of a desire to get rid of it by ulceration, pointing, &c.? Is the risk incurred by the operation commensurate with that which the woman runs if the case is allowed to remain intact? After referring to the cases on record, where the fetus has remained innocuous in the abdomen of the mother during periods varying from ten to fifty-six years, in some of which the mothers have again conceived and borne one or more children, and to cases in which the fetus has been got rid of by ulceration into the vagina, rectum, colon, bladder, or through the abdominal walls, he proceeds to say:—

"We have then, as militating against the operation of primary gastrotomy, the fact that the fetus may remain innocuous for an indefinite period, and next that nature may expel the fetus by abscess or ulceration, at which time the surgeon's assistance may be frequently advantageously employed; in respect to the first, however, there is the prospect that, sooner or later, inflammation and its consequences may arise; and, in reference to the second, many mothers die during the efforts of nature to get rid of the incumbrance. Nevertheless, arguments deduced from a consideration of these circumstances might deter a timid surgeon from any interference, except under circumstances now so frequently mentioned; and it is quite clear that, if the spot where the incision should be made were always indicated, it would obviously be our duty to wait until this took place; but it must be admitted that frequently ulceration occurs in parts where it cannot at first be recognized, and where no surgical means can be employed to aid nature in her efforts.

"Let us look at the circumstances of the case, as afforded by this and other analogous instances. The fetus is dead, and must sooner or later be felt as a foreign body, according to a natural law; if the operation by incision at an early period be not adopted, it must either be removed by the slow process of ulceration, or must be so closed in as to be incapable of becoming a cause of further annoyance, except from its size and position. Of course, I am not anxious to evade the fact that gastrotomy may be successfully performed after ulceration has commenced. But the pointing may occur, as is often the case, in situations where no operation can be performed. I think that, even when no pointing has happened, as a foreign body it ought to be removed. So long, however, as it gives no inconvenience, the decision may rest entirely with the patient; but I certainly would not withhold my sanction to the operation, if she herself, on account of pain, or other cause, were willing to rid herself of her burden."

In reference to the period at which the operation should be performed, Mr. Adams thinks it should never be attempted with a view to saving the life of the child, as all such attempts have been invariably fatal to the mother; and believes that the older the fetus, or the nearer it has approached to maturity, and the longer the operation is deferred (within some, though indefinite limits), the greater the chance of a successful operation, because of the greater probability of adhesion having taken place between the cyst and the walls of the abdomen, and so obviating one cause of danger—the risk of peritonitis. In the case detailed the patient was advised to wait six months from the completion of her full period, at which time Mr. Adams expected a complete adhesion of the cyst to the peritoneum, but was, to some extent, disappointed.

The only point in reference to the operation requiring remark, is in relation to the placenta. It appears that whenever any rude attempts have been made to extract it, the cases have invariably been fatal. Nevertheless, it ought, Mr. Adams says, to be examined by very gentle traction of the cord, to see if it be loose and can be removed with facility, otherwise it is better to leave it alone, with the hope that it will be separated and come away in the discharge, for while it remains the wound will not close; and there is no doubt but that the patient incurs the risk of pyemia so long as the wound remains open.

In a postscript, dated May 30th, 1861, it is stated that the wound had closed up at least four months before, but that the woman has suffered from a large ventral hernia, which is easily reduced, and is readily retained by a suitable truss.

II.—*On an Operation for Pervious Urachus, with Stillicidium Urinæ.* By Thomas Paget, F.R.C.S., Leicester.

Mr. Paget refers to a case previously published, in which, by the finger passed into the bladder through the navel and along the urachus, which had remained open from birth, he had extracted a ring-shaped calculus, formed on a pubic hair for its nucleus, and says he has since accomplished perfect closure in this and another case of the same congenital defect. The operation was first performed on a female child, four months old. On drawing aside the folds of the umbilicus by the fingers, an aperture was seen which would admit a common-sized cedar pencil. The skin was inverted, and proceeded along the opening to the level of the posterior surface of the abdominal parietes, where it met the mucous membrane of the bladder extended along the urachus. Every occasion of thus drawing the skin was accompanied by a gush of urine. The child was well developed, thriving, and lively.

The operation was simply to seize with toothed forceps the integuments at the juncture of the skin and mucous membrane, and hold them while free decortication of the whole circumference of the aperture was made with a small scalpel. Adaptation was effected by a suture-pin and a strip of lint wound on it, as for hare-lip, first in an 8 form, then elliptically, until sufficient breadth of pressure was given.

On the third day the pin was removed, the lint still adhering, but within 24 hours this was washed away by a discharge of urine, when an aperture, scarcely large enough to admit the bulb of a

probe, was discovered, and in a granulating state. This opening soon closed, and the child became strong and healthy.

The second case was that of the man from whom the calculus had been removed, and who was now 55 years old. The opening admitted three fingers in its horizontal axis and two in its vertical. A similar operation was performed, the decortication being carried to the extent of the third of an inch in thickness and two-thirds in breadth, and when the needles were removed on the fifth day, the opening was effectually closed.

Mr. Paget refers to these cases, and to one published in the *Med. Zeitung* of Berlin, as disproving Cruveilhier's statement, that where the urachus is pervious the urethra is always obliterated, and as proving that this congenital malformation may be readily and permanently relieved.

III.—*Contributions to the Subject of Compound Fracture, being an Analysis of 302 Cases.* By Thomas Bryant, F.R.C.S., Assist. Surgeon to Guy's Hospital.

These cases include all that were admitted into Guy's Hospital during the last seven years, and of which Mr. B. takes the details from his own notes. The particulars of the earlier cases, which extended over the last 20 years, are taken from the records of the Hospital. Fractures of the smaller bones, as of the hands and feet, are omitted. The paper being an *analysis*, and already quoted in our pages (vol. xxxiii. p. 435), we must refer those interested to the original, which is full of most valuable materials.

IV.—*Analysis of Fifty-two Cases of Epilepsy observed by the Author.* (Second Series). By Ed. H. Sieveking, M.D., Physician to St. Mary's Hospital.

This is a valuable paper, as bearing on the clinical history of the disease; but we must again refer to the original.

V.—*On Pulsatory Bronchocele.* By Joseph Bullar, M.D., Physician to the Royal South Hants Infirmary, Southampton.

Dr. Bullar gives here two cases of the disease, recently named by Trousseau as "Graves' Disease." In both cases there was enlargement of both lobes of the thyroid gland, with enlargement and protrusion of the eyeballs, and excited action of the heart. There were enlargement and excited action of the carotid and thyroid arteries, and the pulsation was communicated to the thyroid

gland, and gave rise to a peculiar thrill or purring sensation. In both cases the disease yielded to the use of iodine, and treatment directed to the general health. In one case Sir B. Brodie was consulted, and recommended a trial of the old remedy, burnt sponge, which he said he had known to do a great deal of good, after iodine had failed.

Perhaps the most remarkable features about this paper are, that Dr. Graves' name is not once mentioned in connexion with it, and that Sir B. Brodie, writing in 1859, says he had not previously seen more than one case of the disease, "but he believed, when he had inquired about it formerly, he found that it had been described by *some* authors." Dr. Bullar has added nothing to the history of the disease as given by Dr. Graves in his *Clinical Medicine*, and by Dr. Stokes in his work on *Disease of the Heart.*

VI.—*Remarks on the Cause of Closure of the Valves of the Heart.* By W. O. Markham, M.D., Physician to St. Mary's Hospital.

Dr. Markham describes the valves of the heart as containing a layer of elastic tissue; that in the auricular ventricular valves lying under the serous membrane covering their auricular surface, and that of the semilunar lying under the serous membrane covering the ventricular surface. He believes that it is the contraction of this layer that closes the valves, and "*that no other explanation of the fact is possible;*" but, notwithstanding this positive pronouncement, he adds in an appendix that since the paper was read he has satisfied himself that there is one other element of force, which either does, or may play a part—the elasticity of the distended ventricle itself. The force of the auricular contraction, he says, drives forward the blood, and not only dilates, but also forcibly stretches the ventricles; consequently, when this distending force ceases, the elasticity of the distended ventricles comes into play, reacts on their contents, and, therefore, necessarily presses the blood against the ventricular surface of the auriculo-ventricular valves, bringing the valves into perfect contact, and completing their closure. Dr. Markham here makes a rapid approach to the theory of the valves being closed by the pressure of the blood, which, in the first part of the paper he entirely repudiates. We understand him to teach that the first stage of the closure is effected by the reaction of the elastic layer of the valves, and the second or completion is effected by the pressure of the contents of the ventricles, caused by the elasticity of the

walls, before the systole commences. Dr. Markham believes this theory to be of some practical importance:—

"I will, in conclusion, suggest that this view of the mode of closure of the valves may explain some facts in diagnosis which have hitherto puzzled the physician, as, for instance, the existence of a cardiac murmur heard during life in cases in which the valves have been found after death, to all appearance, competent. In such a case I would suggest that the elastic element of the valves has undergone some pathological change, whereby its elasticity has been impaired or destroyed, and, therefore, that the valves were no longer able to rise up freely towards each other during ventricular diastole. In consequence of such imperfect action a certain amount of regurgitation must necessarily occur at the commencement of the ventricular systole, and, consequently, a murmur be excited. The fact also shows that, to prove the capacity of the auriculo-ventricular valves for effective closure during life, we must ascertain the condition of their elastic powers after death, in the manner above described, viz., by removing the auricles of the heart and filling the ventricles with fluid. The greater or less degree of readiness with which these valves rise in the fluid will indicate the condition of their elastic tissue."

VII.—*Pathological Researches into Diseases of the Ear* (Seventh Series.) *Sebaceous Tumours in the External Auditory Meatus, their Effects upon the Organ of Hearing, the Petrous Bone, and the Brain, with Suggestions as to their Treatment.* By Joseph Toynbee, F.R.S., Aural Surgeon to St. Mary's Hospital, &c.

We extract some of the opening paragraphs of this paper:—

"Inasmuch as sebaceous tumours generally produce deafness, and almost invariably cause disease of the petrous bone (disorganization or abscess of the brain being a result in some cases), as their presence in the meatus is far from being infrequent, and as they do not appear to have been recognized by the medical profession, I am induced to lay before this Society the results of my observations upon them.

"Sebaceous tumours are described by writers on the subject of skin diseases as occurring in different parts of the body,[a] but I am not aware that their presence in the external auditory meatus had been even alluded to, previously to the publication of my dissections.

"Nevertheless there can be but little doubt that cases of this disease occurring in the ear, and producing very singular results, must be constantly presenting themselves to the notice of members of the medical profession; it is not improbable that they are included under the category

[a] Mr. Erasmus Wilson has also given them the name of *sebiparous* tumours.

of cases of otorrhea, and when the petrous bone and the brain become diseased they are probably looked upon as cases of caries resulting from otorrhea.

"The results of my observations upon the *structure* of these sebaceous tumours tend to show that they are almost wholly composed of flattened cells of a large size, and very similar to those constituting the epidermis. These cells are arranged in layers; they are enclosed in a distinct membranous envelope, formed of areolar tissue. When developed in the ear, these tumours do not appear to result from a morbid change of the hair-bulb or its follicle; indeed, they frequently occur in the innermost part of the meatus, close to the membrana tympani, where no hairs are to be found. Their shape is usually spherical, and they are met with in every part of the external meatus. They possess the singular property of increasing towards their attached surface equally with that towards the cavity of the meatus, and the result is absorption of the petrous bone. I am not aware that I have dissected a single sebaceous tumour in the external meatus, however small, that had not caused some absorption of the osseous wall. These tumours vary in size from a millet-seed to a large hazel-nut. When of the latter size, they cause an enormous dilatation of the meatus, so that not unfrequently a finger may be passed inwards as far as the membrana tympani. They also produce absorption of the bone to so great an extent that a communication is found with the mastoid cells, tympanum, cerebral or cerebellar cavities. Their progress would seem to be more impeded by the presence of a membrane than by bone, as the membrani tympani frequently remains entire when the surrounding bone has been absorbed. In one case, which will be cited, the tumour went through the external and then the internal osseous walls of the mastoid cells, and came into contact with the dura mater; instead of penetrating it, the tumour passed upwards, causing absorption of the posterior, and then the upper wall of the petrous bone, and eventually entered the tympanic cavity, without producing any perforation in the dura mater. It is a remarkable feature of this disease that the tumour may pass through the substance of the petrous bone, causing a large aperture in it, without producing any visible effect upon the surrounding osseous tissue, the margins of the aperture being often as sharp and well defined as if made by a chisel.

"Sebaceous tumours grow in the external meatus, and even reach to a considerable size, causing absorption of the bone, without the occurrence of pain; indeed, as a rule, the attention of the surgeon is called to them either on account of the deafness which follows the occlusion of the meatus, from the presence of a fetid discharge, or from symptoms of irritation of the brain, which too often terminate in death.

"The circumstance that the presence of a sebaceous tumour in the ear seems capable, by the irritation it causes, of producing an abscess in the

brain, may be adduced as additional evidence (if further evidence be required) in favour of the opinion that, when abscess in the brain coexists with disease of the petrous bone, the abscess is caused by the affection of the ear, and the disease of the petrous bone is not caused by the abscess in the brain.

"The effect of sebaceous tumours upon the membrana tympani and the contents of the tympanum is worthy of observation, the result being, not uncommonly, very serious deafness. In some instances the tumour presses upon the exterior of the membrana tympani, gradually forcing it inwards until its inner surface is in contact with the outer surface of the promontory; in other cases the tumour passes through the membrana tympani, producing an orifice with defined margins.

"The only disease for which sebaceous tumours are likely to be mistaken is the presence of one or more osseous growths in the meatus, covered by the dermis; gentle pressure with the rounded extremity of a probe is, however, sufficient at once to discriminate between the two kinds of growth."

The treatment recommended by Mr. Tonybee is the extirpation of the tumour as completely as practicable, by making a crucial incision, squeezing out the contents, and seizing the cyst with a forceps and removing it. It must be remembered that in the later stages there may be adhesion to the dura mater, and where it is impossible to remove the cyst, it is of importance that the case be well watched, and the contents of the tumour removed as fast as they are secreted, as even a large opening towards the meatus, with a free discharge, does not prevent the tumour advancing towards the brain.

VIII.—*Further Observations on the Structure and Treatment of Uterine Polypi.* By Robert Lee, M.D., F.R.S., Obstetric Physician to St. George's Hospital.

We shall devote a special article to this important paper in our next.

IX.—*Observations on the Growth of the Long Bones, and of Stumps.* By G. M. Humphry, M.D., F.R.S., Surgeon to Addenbrook's Hospital, Cambridge, &c.

Dr. Humphry undertook the investigations, the results of which are here recorded, in consequence of the conflicting opinions which have lately appeared, with reference to the growth of the limb after excision of the knee. The paper has already been referred

to in the *Retrospect of Surgery* (Vol. xxxiii. p. 181), and we now content ourselves with quoting the paragraphs in which Dr. Humphry gives the conclusions he arrives at.

"Agreeing with most preceding observers, that the elongation of a long bone is chiefly caused by growth at the epiphysial lines, I have endeavoured in this paper to show that the elongation proceeds most quickly, as well as is continued longest, at the end where the epiphysis is last united, which is usually the larger end; this is attended with a shifting of the periosteum towards that end, and so regulates the direction of the canals for the nutritious arteries.

"Secondly, that the growth of a stump is not usually proportionate to the rest of the body, and is least so when the more quickly growing end of the bone has been removed."

X.—*Researches on Asphyxia, with Observations on the Effects produced by the Hot Bath in Asphyxiated Animals, and its Use in the Treatment of Suspended Animation.* By A. T. H. Waters, M.R.C.P., Lect. on Anat. and Physiol., Liverpool, &c.

Dr. Waters undertook these investigations, to ascertain the best mode of treatment in cases of acute asphyxia, especially as to the use of the warm bath, which is recommended by some of the societies who issue directions for restoring suspended animation, and expressly forbidden by others, as not only useless but dangerous He performed two series of experiments on dogs, cats, and rabbits; 1st, to ascertain how long the heart continues to beat in asphyxia, for which purpose he kept them under water till all external sign of life had completely ceased, and then opened the thorax, and exposed the heart, when he found, that on a general average of 22 animals, the ventricular portion of the heart continued to beat for 19 minutes, which is just double the period ($9\frac{1}{2}$ minutes) it was found to act by Mr. Erichsen, who experimented on dogs, producing asphyxia in the open air.

The influence of the hot bath Dr. Waters tested, under two conditions, 1st, when respiration had entirely ceased, and there was no attempt towards its restoration, but with the heart still acting; and 2nd, in animals in which it had been re-excited, but was being only imperfectly carried on.

In the first case, in no instance did the bath produce a respiratory effort, or any movement whatever, on the part of the animal, and the action of the heart seemed less vigorous, and to last for a

shorter time, in those animals which were put into a hot bath, than in the others.

Thirteen experiments were tried on animals in whom respiration had been re-excited, and was being carried on, though imperfectly. Seven were treated by the hot bath, in which they were kept for periods varying from $3\frac{1}{2}$ to 15 minutes; of these six died and one recovered. Six animals after being asphyxiated were simply left to themselves, exposed to the atmosphere, of these four recovered and two died.

In cases where respiration has entirely ceased, Dr. Waters believes that the hot bath by momentarily stimulating the heart's action, causes increased congestion of the lungs, with a tendency of the blood to coagulate, and soon paralyzes the heart entirely, and does not excite respiratory efforts. Where respiration has been re-excited, though the hot bath has no immediately bad effect, it tends to produce a fatal result after some hours, by causing extreme congestion of the lungs, and consolidation and collapse of the pulmonary tissue.

XI.—*Letter to the President of the Society, relative to the preceding Paper on Asphyxia, and the Use of the Hot Bath.* From Sir Benj. Brodie, Bart., &c.

This paper was called forth by the paper of Dr. Waters, and its object is to show, that the heart of full-grown, warm-blooded animals does not continue to act, so as to carry on the circulation, for more than a very few minutes after complete immersion, probably 4 to $4\frac{1}{2}$ minutes, but that if the heart be exposed to the air, some contractions of the muscular fibres may be observed at a much later period, which, however, are not the rhythmical contractions, necessary for the circulation of the blood, and are of no value. Once the rhythmical action has ceased it cannot be restored. But it is quite otherwise where the heart's action has ceased in cases of syncope, as in the case of a girl, who recovered under Mr. Wooley's care, after an immersion of six minutes, but who had fallen into the water in a state of syncope; in this case the left side of the heart is filled with scarlet blood, while in asphyxia it circulates dark coloured blood, unfit for the maintenance of life.

XII.—*A Contribution to the Pathology of the Pons Varolii.* By Hermann Weber, M.D., Phys. to the German Hosp., &c.

For the particulars of this paper, which consists of three cases,

illustrating, in some degree, the physiology and pathology of the pons Varolii, we must refer to the original.

XIII.—*On Diseases of the Kidney, accompanied by Albuminuria.* (Second Paper.) By W. H. Dickenson, M.B., Med. Registrar, &c., St. George's Hospital, &c.

In this paper Dr. Dickenson gives an excellent account of the two forms of Bright's disease—the large, smooth, mottled kidney, and the small granular one—contrasting them clinically and pathologically with one another.

XIV.—*On a Case of Aneurismal Varix in the upper part of the Thigh, following the employment of pressure for the cure of an Aneurism of the Posterior Tibial Artery.* By O. Pemberton, M.R.C.S., Surgeon to Birmingham General Hospital, &c.

In this case a man, aged 50, was under treatment by compression for aneurism of the tibial artery, from 17th May, 1857, till the 23rd of April, 1858, the pressure being kept up for several hours daily, first, by a clamp tourniquet, and after three weeks by one of Weiss' compressors; the upper pad being applied at a point between Poupart's ligament and the entrance of the saphenus into the femoral vein. Here the pressure was continued throughout the entire of the subsequent treatment, the lower pad having constantly slipped. The aneurism was cured, and the man's general health improved, and, notwithstanding that the pressure had been kept up on the one spot for nine months, yet there had been no inflammation of the adjacent parts, no enlargement of the neighbouring glands, and, indeed, no alteration in the extremity generally, or in the textures immediately underneath the pad, save, perhaps, that they were somewhat thickened and œdematous.

He remained in good health for ten months, earning his living as a hawker, and travelling long distances, when symptoms of aneurismal varix showed themselves at the point where the pressure had been applied, and from which he continued to suffer till his death, about 20 months afterwards. On examination, the whole of the arterial system was found in an atheromatous condition, and a communication was found between the femoral vein and artery at the seat of the pressure, which Mr. Pemberton believes to have been the result of the changes produced in the vessels, in their unhealthy condition, by the long continued pressure.

XV.—*On a Case of Aortic Aneurism in which a communication with the Pulmonary Artery was recognized during life by means of physical diagnosis.* By W. F. Wade, M.B., Senr. Phys., Queen's Hospl., Birmingham, &c.

This case is important as being, we believe, the first on record in which the peculiar condition was recognzied during life, and, we therefore, extract it in some detail.

A railway porter, aged 35, complained of slight cough, some general debility, and a little loss of flesh, which he attributed to loss of blood from piles, but which led to a stethoscopic examination of the chest, when no sign of disease of the lungs was found; but the following condition:—

"Physical examination showed that the cardiac dulness was increased in the vertical direction. The apex could be distinctly seen and felt beating in the sixth intercostal space, and the heart was also to be seen beating in the fifth. Over the cartilage of the fourth left rib two loud murmurs were heard, instead of the usual cardiac sounds; that, with the second sound, being of a hissing character, and so prolonged, as to continue till the commencement of the next ventricular systole. At this same spot a very considerable purring tremor accompanied the second murmur. The first murmur was of a loud bellows character. Both murmurs were audible as high as the bifurcation of the common carotids, in the back, and over all the upper part of the chest; they did not seem to be peculiarly propagated towards the left subclavicular space. At the apex of the heart a single murmur only was to be heard, and this evidently attended, or rather replaced, the cardiac first sound; it could be traced easily down to the ensiform cartilage. At the apex, the cardiac second sound was very distinct and quite natural; no trace of murmur.

"I found no venous distension or pulse. The pulsation of the carotids was very visible, particularly on the left side, and marked by some, though not considerable, thrill. The heart's action was quiet and regular.

"The only abnormal physical sign in the lungs was some mucous râles at the base of each, equally on either side. Pupils contracted, but mobile; liver enlarged, no icterus; urine normal.

"From this combination of physical signs, I concluded—

"1st. That blood escaped either from the aorta or the pulmonary artery during their systole, from the loud hissing, prolonged murmur replacing the second sound at the base of the heart.

"2nd. That it was probably from the aorta that the blood escaped, from the propagation of the sound up the arteries of the neck, and their visible pulsation and sensible thrill.

"3rd. That the blood did not regurgitate into either ventricle, from the absence of any regurgitant murmur at the apex of the heart, where, on the contrary, an ordinary second sound was audible. It is true that slight regurgitant murmur is not necessarily conveyed to the apex of the heart; but I have never yet found it absent there, except when the murmur was very slight, whilst in this case the murmur was very loud and hissing at its point of origin.

"4th. That the blood probably regurgitated into one of the auricles, or into the pulmonary artery.

"That it did not regurgitate into the left auricle; inasmuch as, had it done so, we should have found more decided pulmonary engorgement, and hemoptysis rather than hemorrhoids or hepatic enlargement.

6th. That the opening was rather into the pulmonary artery than into the right auricle; because aneurisms more frequently perforate the former.

"Further, the frémissement was to the left of the sternum, whereas in recorded cases of openings into the right auricle the frémissement presented its maximum intensity at the right of the sternum.

"7th. That the communication was probably owing to aneurismal perforation of the aorta at or near its origin. Because there was no history of cyanosis to indicate any congenital malformation of the heart. The increased vertical dulness, age, formation, and occupation of the patient, as well as some points of his history, lent strength to this view.

"8th. That the aneurism sprang from the root of the aorta, or near it."

XVI.—*Account of a Case in which the Corpus Callosum and Fornix were imperfectly formed, and the Septum and Commissura Mollis were absent.* By J. L. H. Down, M.D., Assist. Phys., London Hospital, &c.

XVII.—*Syphilitic Inoculation, and its relation to diagnosis and treatment.* By H. Lee, F.R.C.S., Assist. Surg. to St. George's Hospl.

The following are the conclusions arrived at by Mr. Lee, on this subject—we give them in his own words:—

"The principal conclusions to which I have been led in reference to the different points which I have now had the honour to lay before this Society, are, that there are two forms of syphilitic disease, distinguished in their origin by the adhesive and suppurative kinds of inflammation. That one is followed by constitutional symptoms, and that the other is not.

"That the adhesive form of inflammation may be distinguished from

the suppurative by the nature of the secretion which it produces, and by the results of inoculation.

"That both kinds of action may be communicated to the same individual at the same time, and that then the suppurative action will develop itself first, as having the shortest period of incubation, and subsequently the adhesive action will run its regular course.

"That when these two actions are developed upon the same part, the affection which results has not the characters exclusively of the adhesive or of the suppurative inflammation. A mixed form of disease presents itself.

"That the specific adhesive inflammation may be communicated to a person who has not previously had the disease, either directly by means of the discharge from a primary sore, or more indirectly through the secretions of a person affected with secondary symptoms.

"That this latter mode of communication is not so common as the former, and appears to take place in general only when the part from whence the secretion is derived is in a state of increased or unhealthy action.

"That under the circumstances last named, any open sore or abraded surface on a syphilitic patient *may* furnish an inoculable secretion.

"That such open sore, or abraded surface, may be caused by mechanical irritation, by any secondary form of eruption, by a vaccine vesicle, or by a local suppurating syphilitic sore, in a person previously syphilitic.

"That the blood of a syphilitic patient *may* communicate syphilis to a person previously unaffected with the disease.

"That the cow pox and syphilis *may* be inoculated at one and the same time, and that when such a twofold inoculation does take place, the results are, in some respects, analogous to those which follow the inoculation at the same time of an infecting and suppurating sore.

"That the pure vaccine lymph, even from a syphilitic subject will not communicate syphilis."

The remaining papers in this volume are, 1st, a valuable essay on Fibrinous Obstructions in the Arteries, both of the Brain and other organs, by S. W. Sibley, F.R.C.S.; next, an account by Mr. Hulme, of the London Ophthalmic Hospital, of a man in whom both Irides were absent from birth; and a case detailed by Mr. Meadows, of Lowestoft, of a man who, for fourteen months, suffered from spasms of a tetanic character; and in whom, after death, there were found several spots of effused blood on the cord, and a flattened clot, not recent, about the size of a sixpence, on the front of its cervical portion opposite to the body of the fifth vertebra

Pathological and Practical Observations on the Diseases of the Abdomen, comprising those of the Stomach and other parts of the Alimentary Canal, Œsophagus, Cecum, Intestines and Peritoneum. By S. O. Habershon, M.D., Senior Assist. Phys. to Guy's Hospital, &c. 2nd Edition. London: Churchill. 1862. 8vo, pp. 594.

We must surely be well pleased with this edition of Dr. Habershon's work. When the first edition appeared, we reviewed it at very considerable length (Vol. xxv., p. 105), analyzing its contents, and giving it no scanty meed of praise; but, at the same time pointing out certain defects, and making suggestions that we thought calculated to make the book still better and likely to be more useful; and we now find that the author has not only taken our suggestions in good part, but has in fact incorporated our review in his work, a great part of the new matter of this edition being actually derived from our review. Under these circumstances, what is there for us to do but to express our conviction of the excellence of the result, and to thank the author for the high compliment he has paid us in so fully adopting our suggestions. At the same time, we must confess that we would have been still more gratified had he acknowledged our services, and had he, when he did refer to us, given us our right name and designation.

On this latter point we wish to draw attention to the fact, that we are the *Dublin Quarterly Journal of Medical Science*, and not the *Dublin Review*, as Dr. Habershon calls us, which is the title of a theological journal recently established in this city; nor the *Dublin Quarterly Journal of Science*, which is another new journal whose name is likely to be confounded with ours, and which treats of general science and not of medicine.

PART III.

MEDICAL MISCELLANY.

Reports, Retrospects, and Scientific Intelligence.

REPORT ON PSYCHOLOGICAL MEDICINE AND DISEASES OF THE NERVOUS SYSTEM.

PARALYSIS.

The general term paralysis includes both loss of perception and loss of the power of motion. Lesions of perception may affect common sensation, to which Nosologists apply the term *anesthesia;* or the perception of the sense of pain only, to which the term *analgesia* has been applied; and, according to Brown Séquard, other specific senses may be affected without the production of common anesthesia, such as the perception of temperature, of tickling, &c.; but these views are not yet fully established, and no specific names have been applied to such forms of paralysis.

Loss of motive power may depend on disease of the muscles themselves, or of the nervous system; to the latter the term *paralysis* is somewhat arbitrarily restricted; to the former the term *paresis* has been applied, and by Romberg *acinesis*. Friedberg describes the affections of the muscles under the general description of *myopathia*, of which he makes six subdivisions, viz.:—1. From propagation of a similar morbid process from adjoining organs (*myopathia propagata, sive communicata*), as paralysis of the contiguous muscles in peritonitis, pleuritis, pericarditis, &c., affections to which Dr. Stokes has so forcibly drawn attention. 2. M. traumatica. 3. M. rheumatica. 4. From diseased conditions of the blood, M. dyscrasica, as in the paralysis occurring as a sequel to cholera, dysentery, typhus, gastric fever, and the exanthemata, and under this head diphtheritic paralysis might also, perhaps, be included, though in some respects it bears a close resemblance, to the peripheric and reflex forms of paralysis depending on disease of the nervous system. Dr. Friedberg's remaining divisions are—5, from diminished supply of blood and

diminished exercise, M. marasmodes. 6. M. simplex, under which he includes all those cases in which the cause is not evident.

Of paralysis from disease of the nervous system, two specific forms have recently attracted much attention—"General paralysis of the insane," and "Ataxie locomotrice progressive;" and another form has also been much under discussion, viz., "Atrophie musculaire progressive," whose place is not yet decided, pathologists not being agreed as to whether it depends on disease of the muscles themselves, or of the nervous centres. There has been not a little confusion as to the nomenclature of these three forms of paralysis—almost every writer proposing a new name, according to the peculiar pathological views as to their nature that he may have adopted; and many of the new names, besides being cumbrous in the extreme, are liable to mislead, from their involving theoretical considerations. Under these circumstances, it appears advisable to adopt the system to which Trousseau has lent his influence, and append to each form the name of the physician who has either first recognized the disease, or first fully described its leading features. Such names involve no theoretical considerations, they serve admirably as provisional terms to secure clearness and distinctness of definition, and form graceful tributes to the eminent physicians whose contributions to our knowledge they signalize. We have ample precedent for so doing in Bright's disease of the kidneys; Addison's of the supra renal capsules; "Graves' disease," as Trousseau calls exophthalmic goitre; and Corrigan's disease, or permanent patency of the aortic valves, the disease with which Dr. Banks has proposed to associate the name of the present President of our College of Physicians.

Two of the forms of paralysis under consideration have already been associated with the names of Bell, Cruveilhier, and Duchenne, and we now propose to attach the name of Calmeil to that form he was the first to describe, and for which we have not yet arrived at any clinical or pathological definition of universal application, though at least fifteen[a] different names have been given to it. The latest of these is "paresifying mental disease," which has been proposed by Dr. Salomon, in a paper lately translated from the Swedish by our learned townsman, Dr. W. D. Moore. This paper contains, perhaps, the most complete and elaborate discussion of the clinical and pathological features of the disease that has appeared; but the name proposed for it is peculiarly badly chosen—the

[a] We subjoin some specimens of these names: General paralysis; progressive paralysis of the insane (Wood); dementia paralytica; paralysia generalis progressiva; paralysis progressiva; anoia paralytica; dementia paralysans. The French have called it aliénation ambitieuse avec paralysie incomplète (Bayle); démence paralytique; folie paralytique (Parchappe); paralysie générale incomplète (Calmeil); paralysie générale progressive, &c. The Germans call it Geisteskrankheit mit Paralyse; allgemeine progressive Gehirnlähmung; paralytischer Blödsinn.

term *paresis*, which has no definite meaning of its own—having had at least two other applications already, viz., to cases of incomplete loss of power by Romberg, and as a synonym for *acinesis* by Bang.

GENERAL PARALYSIS, OR PARALYSIS OF CALMEIL.

This disease may be said to have been unknown, until it was fully described in the "Memoire" published by Calmeil in 1826, though Haslam referred to it in his "Observations" in 1809, and Boyle in 1822, but till Calmeil drew attention to it, it was not generally recognized, and even Dr. Conolly admits that he did not know it, and yet it has always been of frequent occurrence, and contributes, in a large proportion, to the mortality of the insane.

General paralysis has been thought to be peculiar to those cases of insanity characterized by ambitious, exalted, and extravagant ideas, and sometimes supervening on melancholy, or by hypochondriacism; and to always progress steadily from its first insidious commencement to its fatal termination in general palsy. In a paper in the *British and Foreign Medico-Chirurgical Review* for July, 1860, Dr. Wood criticizes the names hitherto applied, and especially the term general paralysis, as very unsuitable, and proposes to substitute *Progressive Paralysis of the Insane;* but it now appears that not only is the disease not always "progressive," but that it may occur independently of insanity.

Dr. Skea, in an important paper on general paralysis in the *Edinburgh Journal*, alludes to a case which was under the care of Dr. W. T. Gairdner, and in which were present all the physical signs of general paralysis which had affected the patient for five years, without any insanity or affection of the intellectual powers beyond slight embarrassment. Dr. Skea is convinced that if the disease without insanity is to be regarded as a distinct one, it is one very closely allied to the general paralysis of the insane. The following marked case has also been recorded:—

General Paralysis (Progressive) without Delirium. By M. Verga.—*Gazetta Medica Italiana—Lombardia;* and *Annales Medico Psychologiques.*

The subject of the case narrated by M. Verga was a physician endowed with high intellectual power. In the year 1837 he became a prey to the most profound grief, which was concealed from all eyes, but the impression of which was terrible. For three years he resembled a statue, and at the end of this period he appeared to awake as if from a dream, but remembered all that had passed. There did not appear to be any diminution of his intelligence, but his bodily health had suffered. He had cerebral congestion, followed by hemiplegia. There now existed

cross-paralysis, and the muscles of the left side of the face were relaxed, and then diminution of sight and hearing at the same side. In the year 1844 he was again the subject of a seizure which lasted a year and a-half, and again he suddenly recovered his intelligence, as on the former occasion. In 1855 there was a third attack; he was then 77. He was now unable to rise from the recumbent posture, and finding that all the remedial measures were of no avail he gave himself up as lost. The acuteness of his senses and the power of the muscles gradually diminished, the sense of smell alone was unaffected. The paralysis extended to the intestines and the bladder. In 1859 he wished to make his will, and the great philologist and reformer of Italian Lexicography was compelled to affix a cross in place of his signature.

For some time before his death, which took place at the beginning of 1861, he was altogether confined to bed. Notwithstanding the lesions of the functions of sensibility and of the power of motion, Dr. G. never exhibited impairment of the power of articulation. Although constantly pre-occupied with his sufferings he preserved his sentiments, his affections, and the rectitude of his judgment. Up to the period of the loss of his sight he enjoyed reading good books—the milk of old age. Only in the last few days of his life he was the dupe of hallucinations of sight and hearing. This most remarkable case presents an example of a rare disease, and one only described of late years—general progressive paralysis without delirium.

As a rule this form of paralysis is "progressive," not so much in *extent* as in *intensity;* but in the following cases the disease made rapid progress in one, not only in intensity, but in extent also, causing death by asphyxia, and in the other it failed in its character of progression, and was arrested—the patient being restored to health.

Acute Progressive General Paralysis. (*L'Union Médicale.*)—Gomes de Valle reports two cases. The first was a soldier at 20, who, after experiencing abnormal sensations in the feet for a short time, was seized with paralysis of the lower extremities. The upper extremities soon became affected in like manner, and afterwards the pharynx, œsophagus, and the respiratory muscles.

In a fortnight after the paralytic symptoms appeared, the patient died in a fit of asphyxia.

In the second case the paralysis followed an attack of double pneumonia, and quickly attained the same extent as in the first case. In a few months the patient was restored to health.

Symptoms of General Paralysis of the Insane.—In addition to the remarkable modification of articulation, which is one of the earliest symptoms, and the peculiar mental disturbance of the early stages, attention has recently been directed to the following symptoms as likely to assist in the diagnosis.

The State of the Pupils in General Paralysis. By Dr. Austin.

In the early stage of this formidable disease, Dr. Austin says, the pupils are contracted to such a degree as to merit the term pin-point pupils. They are immovable; the vision is not altered. This state is rare. A condition allied to this is when the pupils are contracted, but not to the same extent, and remain symmetrical. A more frequent alteration in the state of the pupils is that in which, with a considerable diminution of the mobility, there coincides a slight alteration in the symmetry. The form is no longer round, but irregularly polygonal. In some the form of the pupil is triangular or trapezoid. One pupil may be contracted and immovable, while the other preserves its mobility and its normal dimensions. When the pupils are but slightly unequal, and the form circular, it is difficult sometimes to ascertain which is the affected eye. It is then expedient to examine the eyes in an apartment which is rather dark—when the one pupil will be found to dilate more than the other. This is preferable to the ordinary mode of examining by a candle, at least in cases of general paralysis of the insane.

Dr. Austin, in addition to his minute descriptions of the state of the iris, informs us that he has established a connexion between the state of the iris and the character of the delirium; and he says he is daily more convinced that the low form of delirium, melancholia, is associated with lesion of the right pupil, and excitement and the délire ambitieux with lesion of the left.

The conclusions derived from the observation of 100 cases are the following:—

1st. When the pupils are equally and slightly affected there is no delirium.

2nd. When the alteration of the pupils is manifest and equal in both eyes the delirium is mixed or alternating.

3rd. When the two pupils are affected—but one a little more than the other—the delirium is mixed, but with predominance of the form which corresponds to the eye most affected.

4th. When the right pupil is most altered melancholia prevails.

5th. When the left, maniacal excitement.

Of his 100 cases there were but two exceptions to these rules.

We believe that the experience of psychological physicians will not be found to support Dr. Austin's views. One physician of great experience, Dr. Skae, has published the results of his observations with reference to the *supposed* connexion between the pupil and the delirium, which go to prove that "there is no connexion between the pupil affected and the character of the mental symptoms."

Expression in General Paralysis. By Dr. Tuke.

Dr. Tuke points out that even in a very early stage there is a marked

look of indifference, frequently accompanied with drooping of the upper and infiltration of the lower eyelids, and a heavy sensuous expression about the mouth, and that there is a boyish appearance of the face—the partially paralyzed muscles no longer showing the lines indicative of care, of sorrow, of ambition, or remorse. At an early period, he says, a peculiar carriage of the head forms a very prominent feature. It is no longer unconsciously balanced upon the shoulders as in health, the patient seems to support it by a voluntary effort, and there is thus a rigidity of the neck induced, which he thinks very characteristic of the disease.

ATAXIE LOCOMOTRICE PROGRESSIVE—PARALYSIS OF TODD AND DUCHENNE.

The disease known under this title closely resembles, or is identical with, that long known as "Tabes dorsalis." M. Duchenne further developed its nature in a series of papers published in the *Archives Generales*, in 1858 and '59, but our own countryman R. B. Todd, fully recognized the disease many years before, and described its pathology more correctly than Duchenne, and we, therefore, associate his name with that of Duchenne, which had before been given to it by Trousseau.

The seat of the disease Duchenne thought to be in the cerebellum, corpora quadrigemina, and intervening commissures, but subsequent investigations tend to show that it is in the posterior columns of the spinal cord, where it had been located by Dr. Todd long before, as has already been recorded in our pages.[a]

The attention of our foreign collaborateurs may be directed to the article "Physiology of the Nervous System," in the *Cyclopedia of Anatomy and Physiology*, by the editor, Dr. Todd (1847). That Dr. Todd was aware that the diseased state to which the name "ataxie" has recently been given was connected with lesion of the posterior columns of the spinal cord, is beyond all question. He says:—"I have long been strongly impressed with the opinion that the office of the posterior columns of the spinal cord is very different from any yet assigned to them. They may be in part commissural between the several segments of the cord, serving to unite them and harmonize them in their various actions, and in part subservient to the function of the cerebellum in *regulating* and *coördinating* the movements necessary for perfect locomotion. The posterior columns come into exercise in balancing the trunk, and in harmonizing its movements with those of the lower extremities. Some support is obtained for this view of the functions of the posterior columns from the phenomena of disease. In many cases in which the principal symptom has been a gradually increasing difficulty of walking, the posterior columns have been the seat of disease. Two kinds of paralysis of motion may be noticed in the lower extremities—the one consisting simply in the impairment or loss of voluntary motion, the other distinguished by

[a] See Vol. xxxi., p. 417.

a diminution or total loss of the power of coördinating movements. In the latter, while considerable voluntary power remains, the patient finds great difficulty in walking, and his gait is so tottering and uncertain that his centre of gravity is easily displaced. In two examples of this variety of paralysis I ventured to predict disease of the posterior columns—the diagnosis being founded upon the views of their functions which I now advocate—and this was found to exist on a *post-mortem* inspection; and, on looking through the accounts of recorded cases in which the posterior columns were the seat of lesion, all seem to have commenced by evincing more or less disturbance of the locomotive powers."

M. Bourdon published a paper on this subject in the *Archiv. Gen.* for Nov. 1861, showing that the disease was seated in the posterior columns of the cord; and M. Oulmont has since recorded another well-marked case, in which a similar condition was found, and also showing that, like general paralysis, the disease is not always or necessarily "progressive."

Observation d'Ataxie Locomotrice; Arrêt de la Maladie et Amelioration pendant Six Mois; Mort par Congestion Cérébrale; Autopsie. Par. M. Oulmont, Médecin de l'Hôpital Laraboisière. (*L'Union Médicale*).

M. Oulmont's object in communicating a report of a case of "ataxie locomotrice" was to add a new fact to those which form the basis of the memoir of M. Bourdon. The following is a brief history of the case:—

A man, aged 35, stated that he did not remember to have ever been ill in his youth. At the age of 30 he had a chancre, and was under medical treatment for three months. Again, at 32, he had chancre and blennorrhagia; the glands of the groin at the right side were the seat of inflammation, and he was again subjected to antisyphilitic treatment. On the 5th of July, 1859, he first experienced pains in the lower extremities. The pains were dull and deep-seated, commencing in the knees, and extending along the front of the legs to the feet; more acute on the left than the right side, and shooting along to the toes. The character of the pain was intermittent; and at night he was sometimes awakened with a start. He frequently complained of cramps and formication. The ability to walk still continued; but, owing to the weakness of the lower extremities, he found it impossible to work. The appetite was unimpaired, and there was neither headache nor pain in the renal regions. The pains in the limbs persisted for about six months; progression became more and more difficult, and in darkness it was absolutely impossible. He felt the ground in walking; but his knees bent suddenly, and he was in danger of falling: finally, he observed that the left leg was often projected outwards. By degrees the pains of the lower extremities subsided, or at least only appeared at intervals more and more distant—the change of weather seeming to have some influence in their production.

The lower extremities had not been solely the seat of the symptoms; for two years the patient had found that he could scarcely dress himself, and he perceived a tingling sensation at the ends of his fingers; but there were neither pains nor cramps in the arms. At the expiration of 18 months he entered the Hotel-Dieu, where he remained for three months and ten days, having been treated by electricity, from which he did not seem to derive much benefit. While in the hospital he contracted small-pox, under which he laboured for some weeks. The pains continued to return at intervals; progression was difficult, and he frequently fell; the formication of the upper extremities was also persistent; the appetite remained good, and the head was undisturbed; there was little impairment of the sense of sight or of hearing.

On the 3rd of December, 1860, he was received into the Lariboisière. *State on admission*:—Signs were present of general bronchitis and pulmonary emphysema. The condition of the lower extremities at once attracted attention. The muscles did not appear wasted, and they contracted under the hand when compressed; the movements are easily performed when the patient is in bed; but when he is up the scene at once changes. The legs are the seat of a tremor, or rather a kind of hesitation, which caused him always to seek a support in walking. He constantly looked at his feet, as if his sight were necessary to aid him in walking a few paces. The hesitation was more marked when his eyes were closed; then it became impossible for him to walk a step without being supported: he threw one leg forwards with a jerk and it fell heavily, so that every attempt at walking with his eyes bandaged was useless, and endangered his falling. He had pains in the lower extremities, but they were less severe than they had been, and only returned every five or six days, and were never of a boring character. When the body is in the horizontal position there is a considerable amount of contractile power, but on flexing or extending the leg on the thigh it becomes almost impossible for him to change his position.

The sensibility of the skin is complete as is that of the muscles. The patient has experienced for the last six months a notable diminution of the aphrodisial desires; however he had sometimes erections at night, and nocturnal pollutions at long intervals. There is a tremor in the upper extremities, but not so much as to render them unequal to the performance of their ordinary functions. There was a sensible amelioration in his state towards the following March; the pains of the lower extremities only returned at longer and longer intervals, being often absent for eight days—and their severity was diminished; finally he could walk with more ease, and the falls were unfrequent. He was even able to take exercise in the garden with the other patients, and to assist the attendants of the hospital. However, there was always some hesitation in his walking; and, on being ordered to shut his eyes, the titubation became more

manifest, with a tendency to fall. The upper extremities had gained more power. This condition remained stationary for six months—to the end of December—when he left the hospital, after one year's residence.

On the 8th January, 1862, the patient was readmitted. He had cough, with muco-purulent expectoration; no night sweats, no palpitation, no headache, no buzzing noise in the ears. Hearing and sight unaltered; memory unaffected from the commencement of the illness; the spinal column unchanged; the muscles of the lower extremities were somewhat wasted; they contracted with ease under the influence of volition; there was no coldness of the extremities, and the cutaneous sensibility remained intact; the upper extremities were now a little wasted also, and the tingling of the fingers' ends continued; prehension of small objects was difficult, and buttoning the shirt could scarcely be accomplished; walking, however, even without a cane, was easy, but he projected the legs forwards; he felt the ground, and the slightest inequalities, but on shutting the eyes he staggered.

January 16.—The patient who, up to this time, rose every morning, and appeared to be well, with the exception of the lesion of motion, complained of epigastric pains; he had vomited bilious matter, and for some days there had been no alvine evacuation. He had cough; and, on examination, fine rales were audible over the whole extent of the chest posteriorly; pulse, 80; expression of the countenance slightly altered. 17th.—No change. 18th.—During the night, delirium and attempts to get out of bed. At the morning visit—headache, but the intelligence intact; no recollection, however, of the disturbance of the preceding night. In the evening the patient was found pale, and lying without consciousness or motion; the head drawn back, the trunk extended; pulse, 90 and small; respiration stertorous; face much altered; pupils dilated; on pricking different parts of the right side slight movements were excited; the left side was insensible. Pressure on the back of the neck caused pain, evinced by heavy groaning; the limbs were in a state of complete resolution; when raised, they fell inertly. The foregoing symptoms led to the belief of the existence of cerebro-spinal meningitis. A large blister was applied to the head; and during the dressing the patient executed some feeble automatic movements. Coma continued, and death occurred at five o'clock in the evening.

Autopsy—40 hours after death. *Lungs*—emphysema and hypostatic congestion of the right. *Heart*, perfectly normal. Digestive tube normal. *Liver*, presented an example of cirrhosis in the second degree. Spleen small and dense. Kidneys large and congested. Brain—Injection of the pia mater of the convexity of the hemisphere well marked, especially between the middle convolutions at the left side; the membranes did not adhere to the grey substance. The pia mater on the inferior surface of the cerebellum presented a slightly opaline tint. All parts of the brain

appeared perfectly healthy. *Rachidian Canal*—The spinal pia mater was found very much injected posteriorly; vessels varicose, and gorged with blood, particularly about the posterior roots; the injection was more prononcée the nearer the cauda equina, where it was of a violet hue. The spinal marrow did not present any injection on the anterior surface. There was no appreciable softening of the spinal marrow. The posterior roots were greyish, collapsed, and surrounded with numerous vascular ramifications. The anterior roots, on the contrary, had preserved in perfection their dull white appearance. The posterior columns in the lumbar region were greyish; and here and there the tint passed into an amber yellow. The same degeneration existed in the superior regions of the cord, but it was more limited in extent. The gelatinous substance which corresponds to the points of implantation of the posterior roots in the lumbar region was hyperemic. The grey substances of the fourth ventricle, and of the tubercula quadrigemina were also notably vascular. The lesion was localized in the posterior columns, the anterior and lateral not presenting any marked alteration.

An interesting fact was noted—viz., that, in the nervous substance which had undergone transformation there existed a prodigious quantity of amyloid bodies; they were more abundant in the inferior region of the posterior columns; in the superior they almost disappeared. These amyloid corpuscles assumed a deep red tint, by the action of tincture of iodine; but the combined action of sulphuric acid and tincture of iodine did not render them manifestly blue, it only changed them to a deeper shade.

The history of this very interesting case proves that the disease is not, at least always, as it is generally supposed to be, uninterruptedly progressive. There was here not merely an arrest of morbid action, but a positive improvement in the patient's state; for, from being scarcely able to use his lower extremities, he had regained so much power that a few days before his death he could walk alone, and without the aid of a stick.

With respect to the pathological changes observed in this case we may observe, that they confirm the views of our distinguished countryman, Todd. More recent observers have done little more than confirm his theory of the action of the spinal cord. This fact also has already been dwelt upon in these pages, but it is necessary to again revert to it.[a]

In a new memoir, published since M. Oulmont's, M. Bourdon again discusses the pathology of the disease; and Trousseau has more recently made it the subject of a clinical lecture.

Nouvelles Recherches Cliniques et Anatomiques sur l'Ataxie Locomotrice progressive. Par le Dr. Bourdon, Médecin de la Masion Municipale de Santé. (*Archivês Generales de Medecine*).

The first memoir of M. Bourdon on the subject of Ataxie Locomotrice

[a] See Vol. xxxix., p. 117.

was published last year. He reports a case which answers the description given by Duchenne, so far as the symptoms, the progress, and the termination are concerned—loss of the power of coördination of the movements of the legs, with conservation of the muscular power, paralysis of the third pair of nerves, myopia, impotency, and long duration of the disease—death was occasioned by an intercurrent affection.

One symptom, however, which M. Duchenne considers characteristic, was wanting, viz.:—the boring pains in the limbs; but this symptom was also absent in the cases recorded by M. Jules Lecoq. Pain, intolerable in degree, existed, but it was continuous, and its seat was the nucha—a second equally unusual circumstance was noticed in this case, namely, the absence of anesthesia and cutaneous analgesia even at the soles of the feet, whereas these lesions of sensibility generally show themselves when the disturbance of coördination is little advanced.

Taking into account the symptoms presented by the patient, M. Bourdon expected to find a lesion of the cerebellum, calling to mind the researches of MM. Flourens and Bouillaud on the functions of that organ and the observation of Duchenne, that if any anatomical alterations be found in ataxie locomotrice they ought to be found in the cerebellum, believing that it presides over the coördination of movements. Notwithstanding the most rigorous search, aided by the microscope, nothing could be discovered except slight and partial congestion, to which little importance could be attached. The spinal marrow however, presented marked alteration amounting to actual degeneration. The posterior columns, the corresponding roots, and the grey substance were most profoundly and characteristically changed. Since the publication of M. Bourdon's observations the subject of ataxie has attracted much attention, and many cases have been observed, and our author has accumulated much valuable and new matter which he presents in the second memoir now before us. The facts recorded, and the experience of M. Bourdon, are confirmatory as to the pathology of the disease. At the reunion of naturalists and physicians held this year at Spire, M. Freidreich, of Heidelberg, referred to a series of facts relative to lesions of the posterior columns of the spinal cord, the symptoms observed during life being alterations of motility of a peculiar character. M. Bourdon, in speaking of the diagnosis of ataxie, notices the fact, that persons labouring under lesions of the cerebellum present phenomena resembling those of the disease under our notice, and difficult to be distinguished from it.

In such circumstances the mode of testing suggested by M. Trousseau is recommended:—The patients are placed upright "en equilibre," the feet closely approximated, and then they are directed to shut their eyes. The ataxic will stagger immediately, and even fall if he is not supported; the patient with lesions of the cerebellum will not experience this sudden loss of equilibrium. Care must also be taken to avoid confounding with

ataxie the "maladresse" of movement, which results from paralysis of tactile sensibility of the skin. If such patients allow objects to fall from their hands, it is because they do not feel them, or they feel them imperfectly. If the gait is hesitating, it is because they do not feel the ground. In ataxie if the patient wishes to walk, he projects his legs in all directions, somewhat after the manner of a puppet, often, even with the assistance of a cane, progression and standing are impossible, and one is obliged to support him—almost to carry him—that he may attempt a few steps. When the loss of coördination affects the upper extremities, if the patient desires to seize an object, some of the fingers are extended, separate and stiff, while others are flexed and moved in different directions, until at last they converge, with difficulty, and grasp the object. Some observations go to prove that disturbance of coördination may engage the muscles of the face, the tongue, the larynx, &c. When the face is the seat of the affection, if the patient speaks, the most disagreeable grimaces distort the features. M. Teissier considers the defect of coördination of the movements of the tongue is manifested by a difficulty of speech, not owing to forgetfulness of the words, but to the muscles of the tongue contracting irregularly in pronouncing them. In speaking he articulates incompletely. This difficulty of articulation resembles that which is one of the most characteristic symptoms of the general paralysis of the insane. In some cases the imperfection of speech may depend on anesthesia of the mucous membrane and skin of the lips. According to Cruveilhier, the muscles of the larynx and the respiratory muscles may be affected; in the patient which was the subject of the observation, speech and respiration were feeble and "entrecoupées."

M. Bourdon observes, that if muscular insensibility does not exist, the disturbance shows itself exclusively in the complex movements, the patient continuing to execute the simple in a normal manner, although with a certain "brusquerie;" the locomotive acts require a sustained attention which is very fatiguing, and emotion, or being noticed by a stranger, render them more irregular; the muscles of the ataxic which are so profoundly disturbed in their coördination retain, notwithstanding, their contractile power, an essential character which distinguishes these functional alterations from the veritable paralysis of motion.

Ataxie locomotrice is not always, according to M. Bourdon, the disease described by Duchenne, having its peculiar physiognomy, progressive character, and fatal termination; he believes that it may appear as an isolated symptom in hysteria, in chlorosis, and in the different forms of intoxication, saturnine, alcoholic, and others. In such cases the disturbance of movement exists without the other morbid phenomena which characterize ataxie locomotrice progressive, properly so called. M. Bourguignon has reported a case which presented the disturbance of coördination and which ended favourably in four months—this may be

looked on as a nervous form of the disease, not depending on any organic lesion.

M. Bourdon asks, is the disease, as described by Duchenne, dependent on an organic lesion, or is it a simple neurosis? The answer is that he recognizes *two* forms. He admits the nervous form, but contends for the existence of these remarkable lesions of the spinal marrow in the true ataxie which consist essentially in degeneration, with atrophy of the nervous tubes, of the columns and posterior roots, and an analogous alteration of the cellules of the grey matter. The motor nerves of the eye, and the optic nerve, and frequently its papilla are altered. The observations of M. Duchenne, and of M. Bourdon, conducted by the aid of the opthalmoscope, have proved, that in the ataxic who are affected with amaurosis or simply amblyopia, there exists atrophy of the papilla of the optic nerve. M. Bourdon gives a number of cases, some of old, and others of recent date, in all there was defect of coördination of movements, accompanied sometimes with amblyopia or amaurosis, and with exceedingly severe pain. Insensibility of the skin was constantly observed; the muscular power was preserved. In 13 autopsies there was found a greyish-yellow degeneration, semi-transparent, having for its constant seat the posterior columns, and in some cases the grey substance of the spinal marrow; there were in addition, atrophy of the posterior roots, sometimes alteration of the optic nerve, and, in one instance, of the tubercula quadrigemina. The microscopic examination of the case reported in the first memoir of M. Bourdon exhibited degeneration with atrophy of the parts referred to with a large quantity of amyloid corpuscles.

Ataxie Locomotrice—Maladie de Duchenne. Par Prof. Trousseau. (*L'Union Médicale*).

The distinguished physician of the Hotel Dieu, after some preliminary observations, in a clinical lecture on the subject of Ataxie Locomotrice, proposes to designate the disease "Maladie de Duchenne," and for the same reasons which led him to give the disease, which in France was formerly known as *goitre exopthalmique*, the name, "Maladie de Graves." Professor Trousseau says he is aware that Romberg gave a description of the affection under the name of "tabes dorsalis," which proves that he had observed ataxie locomotrice, and Cruveilhier, in his great work on Pathological Anatomy, had noted the anatomical lesions which the naked eye detects in ataxie, but they described certain ill-determined varieties of paraplegia, and neither of them succeeded in fixing attention on this new disease, which they did not look upon as a morbid entity. The learned Professor does not, however, seem to be aware of the accurate description of the disease given by Todd in the passage we have already quoted.

Attention was, he says, first fixed on it by Duchenne. With respect to the pathology of ataxie, M. Trousseau is not prepared to agree with M. Bourdon in the opinion, that it is characterized by fixed and determined lesions. The study of medullary lesions, by the aid of the microscope, is of recent date, and it may be discovered, he says, that, certain paraplegiæ, different from ataxie, the consequence of epilepsy, chronic alcoholism, and chorea exist, presenting lesions of the spinal cord and the roots of the nerves, if not identical with those observed in ataxie, at least so analogous as to forbid our looking on the pathological changes as specific. In the present state of our knowledge, however, the lesions observed in ataxie should be accepted as proper to it.

The numerous pathological investigations of MM. Oulmont, Marotte, Vulpian, Charcot, and Luys, have confirmed the statements of M. Bourdon—ramollissement of the posterior columns of the spinal marrow, atrophy of the posterior roots, with atrophic degeneration of the nerve tubes and cellules, as also of the optic nerves, the motor nerves of the eye, and the corpora quadrigemina.

That ataxie may exist without disturbance of sensibility, is proved by the case reported by M. Oulmont, and by many analogous cases. In what class is ataxie to be placed? M. Trousseau says, when he defined it for the first time, he considered it a spasmodic neurosis, characterized by a defect of coördination of the voluntary muscles, complicated often with disturbance of sensibility and partial paralysis; to complete the definition he added the special alteration of the spinal cord and the posterior roots.

According to M. Trousseau's views then, ataxie is a neurosis, but a neurosis leading to hyperemia, which induces a modification of nutrition of the cord and roots, and, finally, atrophy and degeneration of the elements of the nervous tissue; but are not other neuroses accompanied by hyperemia and congestion? Does not Graves' disease act upon the heart, the thyroid gland, and the retina, so as to produce anatomical lesions.

The duration and progress of ataxie prove that hyperemic disorganizing action is not continued; there are times of arrest and even of *retrogression*. The conditions which seem to check the progress of the disease should be sought. The duration of the disease affords time to make many efforts—to try many experiments. The beneficial influence of belladonna and opium in alleviating pain has been proved, but they must be administered in large doses. Electricity, limited to the skin, has sometimes restored cutaneous and muscular sensibility, and rendered the coördination of some movements possible; but this is merely palliative.

Professor Wunderlich has been induced to try nitrate of silver in the "tabes dorsalis" of Romberg, by the success he obtained in a case of hysterical paralysis. M. Trousseau, though he has treated some cases

with nitrate of silver, is not as yet in a position to pronounce on its curative action in ataxie locomotrice.

M. Baillarger has contrasted the character of the two forms of paralysis that we have been speaking of in the following essay :—

De la Paralysie Generale dans ses Raports, avec l'Ataxie Locomotrice et avec certaines Paraplegies. Par M. Baillarger, Médecin à l'Hospice de la Salpêtrière. (*Annales Medico Psychologiques.* 1862).

In the *Archiv. Gen.*, Dec. 1858, there appeared a most interesting memoir from the pen of M. Duchenne (de Boulogne) on "Ataxie locomotrice progressive," a disease, the most striking character of which is a loss of the coördinating power of movement, giddiness, difficulty of standing upright, a sensation of being impelled forward, anesthesia—first, sensation of touch lost, and lastly, that of temperature.

Pains (paroxysmal) duration of which is variable, but always of a boring character. Paralysis of some cranial nerve, often for months or even years, precedes the disease. The sixth nerve is frequently paralyzed at first. Amblyopia frequently exists. The mind is unclouded. The disease is essentially chronic, lasting in some cases for many years. Syphilis, cold, and masturbation have been supposed to cause it.

The age of persons attacked with "ataxie locomotrice" varies from 18 to 43.

As to the pathology, the researches of Duchenne lead him to believe that the cerebellum and corpora quadrigemina are the seat of the lesion.

Such is the disease as described by Duchenne, the connexion of which with general paralysis in some cases has been noticed by Baillarger.

Duchenne has met the two diseases associated, and he has also seen ataxie with hemiplegia, the result of cerebral hemorrhage. With respect to the association of general paralysis with ataxie, it is observed that most frequently the symptoms of general paralysis appear at the first period of the ataxie locomotrice. It is not like some diseases of the spinal cord, which, after existing a long time, become complicated with general paralysis. This disease, on the contrary, may be one of the prodromal symptoms of ataxie, belonging to the period named by Duchenne "céphalique," and characterized by paralysis of some cranial nerve.

In the first case observed by M. Baillarger, the affection of the muscles of the lower extremities was not prononcée when the ambitious delirium broke out.

In another, the patient presented the ordinary prodromal symptoms of ataxie, diplopia, strabismus, paralysis of the third pair, and terebrating pains, subsequently the symptoms of general paralysis supervened—

change of character: loss of memory. Sometimes the disease is far advanced before the ataxic symptoms appear.

It is a matter of much interest to determine, if possible, the influence which one disease exercises on the other, with respect to progress. In one case the general paralysis seemed to arrest the advance of the ataxie, after having presented the signs of the first period, paralytic dementia showed itself: after 18 months nothing remained to indicate the existence of the original disease; the symptoms in no respect differing from ordinary general paralysis.

M. Baillarger observed one patient in whom, the symptoms of general paralysis having existed for six months, the disease had been arrested for the last two years, so much so that there is no sign of embarrassment of speech or of mental aberration. The question to be resolved is, whether these suspensions or cures of general paralysis are more frequent and more lasting in patients attacked with ataxie locomotrice? M. Baillarger says he can do no more than propose the question. One remarkable instance he alludes to in which, on the lower extremities becoming paralyzed, general paralysis in a well-marked form disappeared. It is necessary to guard against falling into the error of supposing that general paralysis is present from the single fact that embarrassment of speech exists, for ataxie locomotrice is sometimes preceded by incomplete paralysis of the lips.

In illustration of this, he refers to a case which presented, for many months, difficulty of deglutition and embarrassment of speech. These symptoms disappeared; but ataxie locomotrice succeeded them, and walking became impossible.

It is essential in all cases, before deciding that a patient labours under general paralysis, to be certain of the existence of lesions of the intelligence. The observations of M. Baillarger prove that the two diseases may develope themselves simultaneously: the patients presenting at the same time the symptoms of general paralysis and ataxie locomotrice to such an extent as to render them unable to preserve the erect posture. Three conclusions may be arrived at from the facts accumulated:—1st. That the general paralysis may continue its progress, but that it seems to arrest that of the ataxie locomotrice. 2nd. That the general paralysis may be cured, while the ataxie pursues its onward course. 3rd. That the two diseases proceed *pari passu.*

In one case diplopia, strabismus, and terebrating pains in the limbs were present; and subsequently, without any special derangement of the coördination of movements, the symptoms of general paralysis manifested themselves. Did ataxie precede the general paralysis here? M. Duchenne would not hesitate in replying in the affirmative. He doubts not that ataxie is established when terebrating pains are united to the other prodromal symptoms. To this opinion M. Baillarger believes there are serious objections.

M. Duchenne, in establishing the differential diagnosis of the diseases under consideration, relies upon the fact that strabismus does not belong to the symptomatology of general paralysis of the insane; and that the same may be predicated of amaurosis. Esquirol, however, looked upon strabismus as a precursory sign of the greatest value as indicating the approach of general paralysis. In three cases under the observation of M. Baillarger this sign preceded and accompanied the disease. In one of the three an autopsy revealed the presence of a little hydatid in the brain. Strabismus and ptosis have also preceded general paralysis; and again, amaurosis has been found to exist for six months before the establishment of the malady—the patient becoming subsequently completely blind. In point of fact, in some cases, amaurosis has preceded every other symptom in general paralysis. Cases are given by Lelut, Lasègue, Parchappe, and by Calmeil. The latter high authority states that loss of vision, whether it be of one eye or both, coincides occasionally with the manifestation of the first symptoms of embarrassment of speech. Strabismus and amaurosis, which play so important a part in the first period of ataxie locomotrice, are not altogether foreign to the symtomatology of general paralysis of the insane.

M. Brierre de Boismont has observed diplopia and paralysis of the fifth pair. There only remain the terebrating pains to be disposed of. A patient in the Salpêtrière, labouring under general paralysis, suffered paroxysms of severe pain in different parts of the body. M. Lasègue reports a case of paralysis (general) preceded by paroxysmal pains. It seems demonstrated that, in a certain number of cases, strabismus, amblyopia, diplopia, and ptosis precede an invasion of general paralysis; but there is no observation of these symptoms being united to terebrating pains, such as occur in the first period of ataxie locomotrice.

M. Baillarger has recently made an important communication on hypochondriacal insanity as a forerunner of general paralysis. We have long been aware of the fact that the ambitious form of insanity is frequently connected with the disease; but the connexion of hypochondriacal melancholia has not, we believe, until now been suggested.

Numerous are the illusions under which M. Baillarger's patients laboured. No organ in the body which has not been believed to be absent. No stomach, therefore no use in taking food. One patient believed he could not pass water—retaining it until the bladder was so distended that finally he was unable to empty the organ. This form of mental alienation M. Baillarger considers a precursor of general paralysis; and moreover, he looks upon its presence as an unfavourable omen as regards the course of the disease.

Can we then prognosticate with certainty the advent of general paralysis by the presence of hypochondriacal insanity. The facts adduced by Baillarger go far to establish the doctrine. That the expan-

sive form of mental aberration is a frequent precursor of this formidable affection seems to be admitted by all who have had much experience in mental disease.

Treatment of Ataxie locomotrice.—Prof. Wunderlich, led apparently by accident, discovered that nitrate of silver exercised a remarkable and unexpected influence over this disease; and MM. Charcot and Vulpian have followed up the suggestion made by Wunderlich.

Sur l'Emploi du Nitrate d'Argent dans le Traitement de l'Ataxie Locomotrice Progressive. Par MM. Charcott et A. Vulpian, Profeseurs agrégés a la Faculte de Médecine, and Médecins de l'Hospice de la Salpêtrière. (*Bulletin Gen. de Thérapeutique Médicale.*)

The investigations of MM. Charcot and Vulpian on the therapeutic power of nitrate of silver in ataxie locomotrice, have been suggested by Professor Wunderlich's communication on the subject, entitled "*Erfolge der Behandlung der Progressiven Spinalparalysie, durch Silbersalpeter,*" published in the *Archiv der Heilkunde*, 1861. Any remedial measure proposed by so distinguished a physician as the author of the admirable work "*Handbuch der Pathologie and Therapie*" should receive a fair trial at the hands of the profession, but there is an additional inducement when we reflect upon the nature of the disease for which the remedy is proposed, and the utter inefficiency of all measures hitherto employed to stay its fatal progress. No one, who has written on progressive spinal paralysis, has borne stronger testimony to its intractable character than Romberg in his *Lehrbuch der Nervenkrankheiten.* He says, "There is no prospect of recovery for patients of this class—the fatal issue is unavoidable; the only consolation which can be offered to those fond of existence, is the long continuance of the disease. If, in any case, the busy activity of the physician increases the sufferings of the patient, it is *in tabes dorsalis.* It is but common humanity to inform him at once, that therapeutic interference can only injure, and that nothing but the regulation of his diet, can retard the calamitous issue."

He condemns cupping and issues, but speaks favourably of the effect of veratrine ointment against the painful sensations in the back and extremities. MM. Charcot and Vulpian give an analysis of the memoir of Wunderlich, which served as the *point de depart* of their researches. It appears that the success which attended the use of nitrate of silver in another form of disease, suggested to Wunderlich the idea of trying it in progressive spinal paralysis (ataxie locomotrice progressive).

A woman had been subject for four years, at the menstrual periods, and frequently also in the intervals, to hysterical convulsions; when the attack was very severe it was followed by general paralysis, for which

many remedies had been employed, but which yielded rapidly to nitrate of silver. This was communicated to Professor Wunderlich, who, doubting the accuracy of the assertion, determined to put it to the test.

After several convulsive attacks, which were not severe, and which were not followed by paralysis, one of extreme severity and long duration supervened, leaving after it paralysis of sensibility and of motion in the lower extremities. At first there was a very slight and spontaneous amelioration, and the patient could walk on crutches; but another seizure took place, and the paralysis was complete. M. Wunderlich at first prescribed pills of an inert nature, allowing her to believe that she was taking nitrate of silver, but there was little change in the symptoms. He then administered nitrate of silver without informing her of the change.

The following day there was a diminution of the paralytic symptoms, and at the end of three days they had completely disappeared. In subsequent attacks the paralysis rapidly yielded to small doses of the nitrate of silver. Wunderlich gives the results of his experience of nitrate of silver in five cases of progressive spinal paralysis, in which he employed it, induced to do so by the effects observed in the hysterical case. In one case the recovery was perfect; in the other four the improvement was remarkable. 1st Case.—A man, 32 years of age. Disease came on slowly after a chill; he was able to walk with the aid of crutches; improvement by nitrate of silver; and subsequently reappearance of the symptoms.

2nd Case.—A man, 49 years of age. Disease appeared after the suppression of profuse perspirations of the feet; rapid progress of paralysis. For one year the gait was staggering; 24 grains of nitrate of silver were taken; the amelioration was remarkable; and then the disease remained stationary.

3rd Case.—A vigorous man of 27. Cause of disease same as last; progress slow; difficulty in walking for two years; notable amendment after nine grains of the nitrate of silver.

4th Case.—A man, aged 55. The disease made its approach suddenly, after the patient had been exposed to cold and fatigue; sensibility of lower extremities obtuse; the patient was only three months ill; he could move his legs when he was in bed, but he could not support himself in the upright posture. On the 22nd of May, he commenced to take $\frac{1}{6}$ of a grain of nitrate of silver three times a day; and on the 31st there was an improvement in the sensibility and in the power of moving the legs. On the 4th of June, he was directed to take five pills each day; on the 9th of June, there was a voluntary evacuation, for the first time, and the patient commenced to stand, with assistance, and to walk a few paces with difficulty; on the 24th, improvement in power of progression; 29th.—The patient walked some steps without any assistance,

(since the 15th six pills daily). It was observed that he was increasing in weight. July 10th.—He staggered when he shut his eyes; 17th.—He walked up stairs, although with much difficulty; his gait is firm when his eyes are open. From this period his progress was uninterrupted, and the use of the medicine was discontinued when he had taken 48 grains. He left hospital on the 28th of August in a satisfactory condition.

5th Case.—A man, 35 years of age. Disease of six months standing; notable improvement by the nitrate of silver; still under treatment.

M. M. Charcot and Vulpian observe, that doubt may be entertained of the reality of the influence of the nitrate of silver, from the fact, that the morbid phenomena sometimes disappear, either spontaneously, or while the patient is being treated by divers means, amongst others cold effusions or certain mineral waters.

This objection has not been overlooked by M. Wunderlich, but spontaneous cure is so exceedingly rare an event, that it is scarcely possible to admit, that in the five examples of the disease there should be presented a series of rare and exceptional cases.

In forming a judgment as to the real value of a new medication, and the reliance to be placed on it, a comparison should be instituted with the modes of treatment hitherto in use. The impotence of many remedial agents has been proved in ataxie, of the preparations of strychnine, brucine, iodide of potassium, mercury, electricity, issues, hydropathy, mineral waters, &c., &c. Some have had an injurious effect—such has been noticed with respect to the application of caustics to the dorso-lumbar region, and even to Faradization.

The observations of Wunderlich refer to cases of comparatively recent standing; all his cases could walk, although with difficulty, with one exception, and in this instance, though the upright posture was impossible, the patient could move the lower extremities when he was in bed. This was the only instance of complete cure, and it is worthy of remark, that though the disturbance of motility was profound, the origin of the disease did not date back more than three months.

The patients treated by MM. Charcot and Vulpian with nitrate of silver, were in a very different condition, the disease having existed many years, and the patients having been sent to the Salpêtrière as incurable, after having been treated in several hospitals. Wunderlich, after having proved the good effects of nitrate of silver in recent cases, expresses an opinion as to the hopeless nature of the malady in its inveterate form. The experience of Charcot and Vulpian renders it probable that this view is too absolute, and they endeavour to explain how an improvement may take place, in cases such as they have encountered. In their dissection of two cases, they examined microscopically the spinal marrow, and they found lesion of the posterior columns and the posterior roots. In cases of ataxie, the grey substance is generally intact, the nerve tubes

of the posterior columns, and the roots, are alone the seat of alteration, which frequently consists in a disappearance of the medullary matter, the sheath of the tubes remaining unaffected. One can conceive that such an alteration is capable of undergoing a process of repair, and gradual restoration of the normal function. In all cases treated by Charcot and Vulpian, the nitrate of silver was given in small doses: for some time two pills, each containing a centigramme of nitrate of silver, were administered daily; at the end of a variable period three were given. In no instance, save one, was this dose exceeded, and in this, four were the daily allowance. Nitrate of silver may be exhibited in small doses, for a lengthened period, without danger of the skin assuming a dark hue. In one of Wunderlich's cases, 48 grains were taken. It has been employed already in gastritis, gastralgia, chorea, syphilis, and epilepsy, but it is only in the latter disease that the blackish tint of the skin has been observed, and only when its use has been continued for a long time, and that the dose has been large. Perhaps the treatment might be persisted in for a long time, if it were suspended occasionally and again resumed; but in such a disease as ataxie locomotrice, relief may be sought even at the price of a slight modification of the normal tint of the skin. MM. Charcot and Vulpian have tested the power of nitrate of silver in five cases of ataxie locomotrice, and in one of paraplegia, in which the symptoms of ataxie were absent. The first was a woman of 52 years of age, who entered the Salpêtrière on the 10th of September, 1855. The disease was of 15 years' standing, and at the time of commencing the nitrate of silver treatment, seven years had elapsed since she had been received into the hospice as incurable. On the 11th of April, 1862, her condition was grievous as possible, nearly deprived of sight, incapable of even sitting up in bed, and scarcely able to help herself with her hands, beset with acute pains, pale, emaciated, and almost dying. In ten days after commencing the nitrate of silver there was a manifest amelioration, and, at the end of 20 days, it was so considerable, that she was better than she had been for a year previously. The amendment progressed; the power of movement increased in force and precision, and the sensations became more acute; the characteristic pains had long since disappeared; the sight was so improved that she could distinguish persons around her; in short, the improvement in all respects was greater than could have been hoped for.

The history of the second case is analogous to the preceding, the same concatenation of symptoms, in a word, ataxie locomotrice in its full development. The result of treatment was equally satisfactory.

The patient, who was the subject of the third observation, was 57, and had laboured under ataxie locomotrice for two years, and was 18 months in the Salpêtrière when she was placed on the nitrate of silver treatment; she could not stand, and for some time symptoms were

present, which, to all appearance, indicated active irritation in the spinal marrow. On the 19th of April she was placed under treatment, and in about six days there was an appreciable improvement. On the 29th of April she could walk some paces with the assistance of one person. At the end of a month she could stand upright, and walk a little on crutches.

The next case was a woman, aged 56, who had long been a servant in one of the wards of the Salpêtrière; the ward was extremely damp. For two or three years before the paralysis appeared, she had suffered from severe pains all over the body, but more especially in the lower extremities. Towards the end of 1857, paralysis of the lower extremities commenced to show itself, she was suddenly attacked with numbness of the left leg, which increased gradually, and at the end of a year there was perfect paralysis. At the age of 53 cessation of the catamenia. Since that event violent pains in the left leg, accompanied by involuntary movements, and a sensation as if a bar were round the abdomen, with incessant vomiting. In 1861 the right leg began to be affected; the upper extremities continued in a perfectly normal state, and the sight was never affected. The lower limbs were atrophied. When placed upright, one or other leg oscillated involuntarily, and when an attempt at walking was made (the patient being supported under each arm), the limbs were projected without measure, and they frequently came in collision with each other, or with those of the persons at each side. Tactile sensibility was obtuse; cutaneous Faradization only produced a slight burning sensation. On the 25th April treatment commenced, two pills (one centigramme of nitrate of silver in each) were given daily. On the 2nd of May—three pills daily—there was some improvement, and on the 14th the patient could stand for some moments without support, and she could raise and lower the limbs slowly. 30th May, improvement in all respects, particularly as regards motility and sensibility. In about half an hour after taking each pill, she felt a frémissement all over the body, but chiefly in the lower extremities.

The fifth case is one of ataxie locomotrice—the origin of which dates so far back as 15 years at least—the subject a woman, aged 46, admitted into the Salpêtrière as incurable, on the 13th of July, 1858. Seven years previously she had derived benefit from Faradization, but on the interruption of the treatment the weakness of the limbs returned, and the disease progressed. She was again received into hospital, when she was treated by caustics, which appeared to produce a considerable aggravation of the disease. Again electricity was resorted to, with a like beneficial result, which, however, was not lasting, the affection soon after resuming its former character, and becoming progressive. As in the last case, the ataxie was confined to the lower extremities, but at the period the patient was placed under treatment she was affected with a tingling sensation in her fingers. Diplopia, also, to some extent, existed. On the 29th of

April the nitrate of silver was administered for the first time (two pills daily), at the end of 10 days she was sensibly better. On the 5th of June the patient, who, from her admission into the Salpêtrière, could only drag herself, so to speak, round her bed, holding on by it firmly, could now stand for some time near her bed, without any support, and she could walk, holding two persons by the hands, or pushing a chair before her—there was no longer any ataxie of movement. The general health was remarkably improved. MM. Charcot and Vulpian next make some observations on these five cases, which are still under their observation. It must be remembered that the ataxie locomotrice progressive was well marked in all; that at the "debut" of the treatment the disease had attained that period when it is generally looked on as incurable; that in all, during the course of the medication, a very notable amelioration in the greater part of the symptoms was observed—this occurred from four to ten days after commencing the nitrate of silver; the tactile sensibility was improved; the sensation of position attained precision; the sensibility to temperature, so habitually perverted, recovered, to a certain extent, its normal conditions. Vision, in one case, participated in the favourable modifications induced by the treatment. The pains entirely ceased, and this was one of the results which most promptly manifested itself. The movements acquired force and precision, thus patients confined to bed for years, and unable to sit up or change their position, could retain the vertical position without support, or even walk some steps with the aid of the attendants —one of them was able to walk for a quarter of an hour on crutches, another merely by assisting herself with a chair. In every instance the ataxic movements, at first very prononcée, have ceased to manifest themselves, or are scarcely appreciable. With respect to the state of the tactile sensibility in ataxie, it was noticed that it had, in the 10 cases in the Salpêtrière, suffered a considerable amount of enfeeblement. When the finger is placed gently on the skin of the part affected, if the patient is blind, in general there is not the slightest perception of contact, and it was the same with the others when the eyes were closed, or when a part of the body which could not be seen was touched, as for example, the skin of the lumbar region. In the opinion of the authors, this diminution of tactile sensibility is a constant morbid phenomenon in advanced ataxie, and it should not be assumed that the sensibility is intact, unless this mode of exploration is practised. Again, returning to the state of the patients after treatment, the general health was improved, constipation had yielded, the appetite had increased, they had gained flesh, and the cachectic aspect, which they presented in a high degree, had been very much modified.

It is interesting to refer to the tingling experienced in the limbs, generally in about an hour after taking the pill, and which ceased, on an average, in from two to three hours. In one case the startings in the

lower extremities resembled the action of strychnine on paralyzed limbs in cases of cerebral or spinal paralysis. These effects ceased, in general, after the patients had been 10 days under treatment, and reappeared for some days when the dose of nitrate of silver was augmented.

In addition to these phenomena eruptions (lichnoid and pruriginous) accompanied by violent itching, showed themselves all over the body, but principally on the limbs, soon after the commencement of the treatment, and were actually still persistent when the communication was published. In one patient a sensation of heat in the epigastrium, more or less painful, was experienced some moments after the ingestion of the nitrate of silver, but soon tolerance was established, and the pains did not recur, except at the times when the dose was increased.

Touching the mode of administration of the nitrate of silver, and the probable changes it undergoes. It was given in the form of pill by means of crumb of bread or liquorice, marsh mallow, or syrup, but a great part of the salt is modified. In point of fact, the researches of M. Cloez prove that in the recently prepared pills four-fifths of the salt of silver are decomposed, and pass into an insoluble state under the form of oxide of silver and metallic silver, and salts probably insoluble in organic acid: as to the part which remains soluble, it is not quite certain that it continues in the state of nitrate. Even though the salt may undergo a decomposition almost complete in the pills, it is a matter of secondary importance, as the silver is absorbed, and enters the torrent of the circulation. This is settled, as M. Cloez has demonstrated its presence in the urine, and has even collected the silver in the form of little metallic grains.

The authors of this important and valuable communication have the five patients still under treatment, and they, in conclusion, ask, what is the future which is reserved for them? are they to suffer a relapse, and lose that which they have gained; or, on the other hand, is the amelioration to be maintained, or even to still make progress?

For a response we must wait patiently, fully agreeing in the propriety of publishing the results, incomplete though they are, inasmuch as they are worthy of the attention of the physician, and of multiplied observations. It is no small benefit which conferred upon the patient, confined to bed for years, the power of rising and of sitting in an arm chair, and even of walking a few paces, which relieved all from pains sometimes intolerable, and restored the appetite and strength, and finally awakened hope. If, in the inveterate examples of ataxie locomotrice, we can scarcely expect an amelioration more or less marked, or more or less durable, it may be permitted to hope—one of the facts reported by Wunderlich justifies the hope—that in cases less grave and not so far advanced, we may arrest the disease in its progress, or procure an amendment almost equivalent to a cure.

MM. Charcot and Vulpian conclude their paper by detailing a case of complete paraplegia, unconnected with ataxie, in which the nitrate of silver acted most beneficially.

In the selection of cases for trial much importance is attached to classification, as it has been observed that marked aggravation of symptoms has been caused in paralysis of the lower extremities connected with myelitis.

The indiscriminate employment of nitrate of silver in all cases in which locomotion is more or less seriously implicated, is calculated to lead to erroneous conclusions.

WASTING PALSY—PARALYSIS OF BELL AND CRUVEILHIER.

The confusion arising from the various names assigned to this form of paralysis is very great. Dr. Roberts, in his excellent monograph,[a] adopts the term wasting palsy, as short and convenient, and expressing its most remarkable feature; at the same time suggesting that it should be called by the name of Cruveilhier; but it would appear that that of Sir Chas. Bell should, in justice, be added. As in the previous cases, the attempts to name the disease by its clinical or pathological characters, have been quite unsuccessful, the features that were used for the purpose having been proved by increased experience not to be constantly present. Thus Aran calls it "atrophie musculaire progressive," and Duchenne "atrophie musculaire avec transformation graisseuse," and Sandahl combines both characters in his name, calling it "atrophia muscularis paralysans, adiposa, progressiva," a name rather inconvenient for common use, in addition to its being inappropriate, from its being now well established that, though the muscles generally undergo fatty degeneration, there are cases in which there is no transformation into fat, and that the atrophy is not necessarily progressive.

In this Journal, and in the *Dublin Hospital Gazette*, cases presenting some points of importance have been published by Dr. Reade and Dr. Banks, proving, amongst other things, that the disease is not always progressive. Dr. Reade's[b] was that of a young man, 19 years of age, who had been suffering from the disease for 18 months. When he stripped his body to the waist, he exhibited neck, chest, and arms, to the elbow-joints, reduced to a most abject degree of emaciation, such as is seen pervading the whole frame of those who have undergone protracted wasting disease. The emaciation—the decadence of muscular fibre together with the tegumentary covering—was perfectly symmetrical, muscle for muscle, on each side of the median line, both on the anterior and posterior aspect of the trunk; the greater and lesser pectoral muscles

[a] Reviewed in Vol. xxvi., p. 101.
[b] Dublin Quarterly Journal, Vol. xxii., p. 393.

were little more dense than the strongest brown wrapping paper; the muscles of the neck, anterior and posterior, proportionately attenuated; the muscles on the scapulæ, particularly the supra and infra spinal muscles, were so much diminished as to show the spine of the bone, with distinctness only less than the dry bone; all prominences from the deltoids were gone, and the muscles of the humeri were reduced to the cellular membrane, the mere elementary outline of the muscles, the biceps and triceps especially; from the elbows, the muscles of the fore-arms and hands displayed the full development of a robust and vigorous man of his stature, with all the concomitant power, sensibility, and aptitude for use. All the muscles outside the pelvis, and those of the inferior extremities, were full, strong, and well-formed.

His history was this:—Within the period of eighteen months he was in all respects, as regards the muscles of his neck, trunk, and arms, in due proportion with the forearms and lower limbs, and he was distinguished among his companions in all athletic exercises. The first sign of his approaching malady, which he perceived, was a degree of stiffness or difficulty of executing the motion of putting on or removing his hat from his head. He never suffered pain, and has enjoyed uninterrupted health, his digestive functions being performed with perfect regularity.

Dr. Reade treated him by counter-irritation over the cervical vertebræ, put a seton into the back of his neck, and gave him mercury in small but long-continued doses, keeping him under its sensible action for three months. He subsequently made him use dumb-bells, to excite nutrition by the stimulus of gymnastic exercises, and used electro-magnetism for several weeks. Under this treatment he recovered flesh and substance on the scapulæ, and especially the spinati muscles, but afterwards thought his strength diminished; and after about two years the treatment was discontinued. At the expiration of six years Dr. Reade again saw him, and gives the following account of him:—"The change in his appearance is most decided, and altogether on the side of improvement. The first marked amendment which strikes the eye is the fair amount of adipose substance which has been restored over the whole of the emaciated surface of the chest, back, neck, and arms; he might be said to be in good condition; formerly, the ribs were all prominent, and the conical form of the chest was as apparent as in the skeleton, from the disappearance of the pectoral muscles and the excessive thinness of the tegumentary covering; over the back of the humerus the integuments fell in a loose fold; the muscles of the neck have all been fully restored; the muscles of the scapulæ considerably augmented; the deltoids in a small degree, but the fibre feels tense and very firm; the triceps and biceps are little better than membrane, but possess true mascular action, perfectly obedient to the will. The muscles of the forearms have lost much of the bulk they had six years ago; the hand has become attenuated; this may

be accounted for by his occupation, viz., a sedentary and mental pursuit for six years. He reports himself as possessing at present, and during the whole progress of this extraordinary disease, the most uninterrupted good health, his digestive functions being performed with invariable regularity; and never, from its commencement up to the present time, had he the least pain pending the degeneration of the muscles. . . . His present exercise is pulling an oar in a boat on the sea. It is here established that the symmetrical atrophy may undergo arrest, may even renew the vital action of nutrition to the renovation of the decayed muscle."

Of Dr. Banks' cases,[a] one had been the subject of the disease for five years: it began in the right arm with pains, thought to be rheumatic, after exposure to damp and cold and much continuous work at shoemaking. The fingers first became weak, then the wrists, accompanied with cramps and convulsive twitchings of the muscles; the disease extended to the forearm, and, after some months, the left hand became affected in precisely the same manner, the thumb being the first part implicated, and then the muscles of the forearm, with loss of substance. The muscles of the back of the neck and of the shoulders were subsequently implicated, those of the lower extremities were unaffected; the man was active and a good walker. The affected joints were generally very cold, livid, and moist; but there was at times a marked elevation of temperature, their sensitiveness to impressions of cold was very remarkable; and as the disease was commencing the muscles were always more feeble in a cold than in a warm atmosphere. The function of sensation was unimpaired. During a residence of three months in the hospital, he was subjected to electro-magnetism, and a tonic treatment was at the same time employed. Some improvement appeared, particularly in the flexors, which became slightly increased in bulk, and the disease, which had progressed for two years, was arrested, no new set of muscles becoming affected.

The second case recorded by Dr. Banks is that of a gentleman, 64 years of age, in whom the disease set in after a fall received 24 years ago, in hunting, when he was slightly stunned, but soon recovered. The left leg was first affected, then the right wrist, and next the left, but not so completely as the right. The disease progressed for about one year, when its onward course was stayed. The general health was good, and the intelligence far above that of ordinary persons.

The pathology of the paralysis of Bell and Cruveilhier is the subject of much discussion. Cruveilhier attributed the disease to atrophy of the anterior roots of the spinal nerves, but subsequent researches have not confirmed this view. Many pathologists regard it as a true acinesis, or disease of the muscles themselves, and Dr. Roberts has examined into the evidence, and pronounced a verdict in favour of this view of its

[a] Dublin Hospital Gazette, Vol. vii., p. 225.

nature. He collected the particulars of all the cases that had been recorded at the time of his writing (1858), and analyzed them.

The alterations found in the nervous system were by no means constant. The brain and medulla oblongata were free from disease in every case examined. In 9 out of 13 autopsies the spinal cord was sound, in some, even the microscope failing to reveal anything abnormal. Of the 4 in which morbid states were discovered, there was more or less extensive softening in 3; and in the fourth (Virchow's) there was amyloid degeneration. Great importance attaches to the condition of the anterior spinal roots, in consequence of Cruveilhier's observations. In his two cases he found them atrophied. Schneevoogt and Valentiner found them in the same state in one case each, along with softening of the cord; and Dr. Roberts quotes from Dr. Reade's very excellent description, published in this Journal for November, 1856, of the case that occurred in his practice, an allusion to a case that was examined in the Belfast workhouse, as the only further confirmation of Cruveilhier's observation. On the other hand, it appears that in five cases in which this alteration was specially looked for, it did not appear. These are detailed by Dr. Meryon, in the *Medico-Chirurgical Transactions;* by Landry, in the *Gazette Médicale;* by Oppenheimer, in the same; by Virchow, in *Virchow's Archiv;* and by Laboulbéne, in *L'Union Médicale.* The existence of these five cases we believe, with Dr. Roberts, to be a fact of capital importance in the discussion of the pathology of wasting palsy.

In 6 cases the peripheral nerves were examined; in 3 the motor nerves were more or less atrophied, probably a secondary change. In 2 no change was found. In 2 the sympathetic in the neck was examined; in one, Landry could discover nothing abnormal; in the other, Schneevoogt found that part of the cord in the neck, the lower cervical and some of the thoracic ganglia, had undergone fatty degeneration, a condition that had been diagnosticated during life from the contraction of the pupil.

"To the muscles themselves, therefore," Dr. Roberts says, "we must look for the primordial phenomena of wasting palsy. This opinion is held by Duchenne, Aran, Oppenheimer, Wachsmuth, and Dr. Meryon. Of the nature of the blight that withers the muscles, he is only able to say, with Dr. Meryon, that it is a fatty and granular degeneration of the muscular fibre, similar (often at least) in its anatomical bearings to what is observed in fatty heart, or in muscles which have degenerated from section of their nerves. There would seem to be an error of nutrition in the muscular fibre, not dependent, as Dr. Meryon thought, on a general depression of the nutritive functions—these being almost always in their highest perfection—but brought about under the influence of a peculiar constitutional predisposition or diathesis, by the aid of one or more of the special exciting causes.

"That the entirety of the disease is not comprehended in its local

manifestations, and that a constitutional predisposition lies behind these, is made evident by the transmissibility of the disease from parent to offspring; and also by the total inadequacy of the exciting causes, acting alone, to produce the series of events which characterize wasting palsy. An additional proof is seen in the bilateral symmetry of its march. This symmetry, although by no means constant, or always exact, is quite as remarkable as anything presented by pulmonary tubercle, articular rheumatism, or syphilitic or other eruptions of the skin."

But new evidence has recently appeared, making it necessary that judgment should be suspended. Mr. J. Lockhart Clarke, who is so distinguished for his investigations into the minute structure of the spinal cord,[a] and who has discovered new methods of making microscopic sections of it, has found in two cases disease of the ganglionic corpuscles in this centre, that may prove to be the cause of the muscular atrophy, but may possibly be no more than a consequence or an accidental associate of it. His first case was a well-marked one of the disease, in a man, aged 65, who had suffered from it for five years. At the autopsy no important morbid change was apparent, except some undue subarachnoid effusion and some granular alteration of the wasted muscles; but on microscopic examination, Mr. Clarke detected, in the posterior grey substance of the cord, some unnaturally transparent streaks, patches, or spots occupied by a granular substance. These spots appeared to be most numerous about the middle of the cervical enlargement, and diminished upwards and downwards. In one of them a vacant space was found, with broken ends of nerve fibres projecting into opposite sides of the space. Around the central canal of the cord and the medulla oblongata, and in the anterior and posterior spinal commissures there was a considerable deposit of *corpora amylacea*. The floor of the fourth ventricle was covered with minute granular elevations, consisting of aggregations of the ordinary epithelial cells.[b]

In another case, in which the disease began in the left hand, and extended gradually, till it affected all parts of the body except the face, Mr. Clarke found very similar appearances. In this case the whole cord was atrophied—there was no brachial enlargement whatever. The nerve-cells were found to be in a singular state of atrophy, without nuclei or distinct granular contents. The central canal was about its normal size; but the epithelium around it was increased or hypertrophied. There were no corpora amylacea found, but the connective tissue throughout the cord, and particularly between the white fibres, was unnaturally abundant; and the increase of it, with the atrophy of the white fibres,

[a] For abstracts of Lockhart Clarke's papers see Vol. xxix., p. 117, and Vol. xxx., p. 454.

[b] Arch. of Med., Oct., 1861.

caused considerable displacement of the parts of the cord. There was no examination made of the paralyzed muscles.[a]

Dr. Gull, of Guy's Hospital, has recorded a case which is remarkable for the slight degree of the affection, and the great amount of morbid condition found in the cord. The patient, aged 44, was a journeyman tailor, of sober habits, and always healthy and strong, and had never met with any injury. He was admitted into Guy's Hospital on the 5th of February, 1862. Thirteen months before this the fourth and ring fingers of the right hand became weak and flexed, without any assignable cause. The hand was cold, and there was a feeling of numbness in the fingers, but no pain, and he continued working at his trade. Two months before admission the middle finger of the same hand became suddenly affected, and three weeks before admission the three inner fingers of the left hand became weak and flexed, but without numbness. The arms were not affected. The interosseous muscles, and those of the thenar and hypothenar eminences, almost completely disappeared, especially in the right hand. The patient died from typhus fever on the 8th of March. On examination a large cavity was found in the cervical region of the cord, beginning at the fifth nerve, enlarging from that to the seventh, and then tapering downwards, and containing fluid. A chronic cervical *hydromyelus*, comparable to a chronic *hydrocephalus*. What the nature of the change in the cord was, Dr. Gull says, may be a matter for speculation. So far as it affected the grey matter it seemed to be no more than atrophy, from distention of the ventricle of the cord, by an accumulation of fluid in it.[b]

It is difficult to believe that the condition of the cord in this case was anything more than a coincidence; but on reviewing the whole subject, we must, for the present, say with Dr. Gull, that the disease may arise from primary disease of the muscular elements—or from lesion of the trunks or branches of the nerves—or from morbid changes in the grey matter of the cord, and that it is the difficulty of distinguishing the primary seat of the disease in each of these classes of cases, which has led to exclusive, and therefore erroneous, views of their pathology.

(To be continued.)

[a] Brit. and For. Med. Chir. Review, July, 1862, p. 215.
[b] Guy's Hospital Reports, Vol. viii., 1862, p. 244.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.[a]

TWENTY-FOURTH ANNUAL SESSION—1861-62.

Old Gunshot Injury of the Tibia; recent Fracture of the Femur.—Mr. Tufnell exhibited to the Society the tibia of an old man, aged 78, who, 52 years before, at the battle of Busaco, had been wounded by a musket-ball. The bullet had lodged in the cancellated structure of the head of the bone, and been removed from thence by means of a trephine. The cavity formed by the ball had never filled up, but remained an open discharging wound, lined by a pyogenic membrane, and daily secreting a quantity of fetid pus. The integuments were adherent around the edge of this opening. No treatment had been adopted beyond keeping the part clean, and placing over the opening into the bone a piece of linen smeared with grease.

The presence of this cavity in the head of the bone had not caused much annoyance, and for five-and-forty years he laboured regularly as a bricklayer's assistant.

About six years since, finding himself to be getting infirm, he became an in-pensioner of Kilmainham Hospital, where he remained until the period of his death, which arose in the following manner:—Like most old soldiers he was given to drinking, and took his liquor freely, but not to prejudicial effects, until two days before his decease, when he got very drunk, and fell helplessly whilst crossing his room, fracturing the left femur through the trochanters by the direct violence of the blow.

When brought to the infirmary the limb was shortened, but not to any great degree. The foot everted; and before the groin a considerable projection formed. He complained of no pain, but was incoherent, and this, in all probability, resulting from intoxication more than shock. He had been suffering for some days from diarrhea. Stimulants and support were given, but he never rallied, and died in 40 hours from the receipt of the injury.

Upon examination of the parts in the vicinity of the fracture, they, and indeed the whole thigh, on its front and outer aspect, were found gorged with black blood, every tissue being infiltrated with it. The fracture of the femur extended obliquely through both trochanters, the upper portion of the lower fragments being in front of and lying upon the upper fragment.

With reference to the cavity in the head of the tibia, it differed greatly from that observed in a somewhat similar case by the late Sir George Ballingall, of Edinburgh, and reported in his *Military Surgery Museum*,

[a] These reports are furnished by Dr. R. W. Smith, Secretary to the Society.

in this respect, viz., that the enlargement of the head of the bone was, in his case, excessive, whilst here its size was in no way affected.

In Sir George Ballingall's case the individual had lived to a very advanced period of life, labouring, too, for his bread, but working as a boatman; and, finding inconvenience from the oozing of pus, he had plugged the orifice with a wine bottle cork. Nature, to resent this irritation, had thrown out new bone, whilst absorption, by the pressure of the foreign body, had, at the same time, been going on from within, necessitating the enlargement of the plug, until, at the period of his death, it required a piece of deal as large as a bung, wrapped round with old linen, to stop the vent.

Each day the old veteran used to take out the stopper, and holding his leg over the side of the boat, wash out the cavity well with sea water, and then close it for 24 hours, when the process was repeated.

Mr. Tufnell was indebted to his friend Dr. William Carte, physician and surgeon to Kilmainham Hospital, for the opportunity of exhibiting this case.—*January* 25, 1862.

Concentric Hypertrophy of the Left Ventricle of the Heart.—Professor Law exhibited a specimen of concentric hypertrophy of the left ventricle of the heart. He remarked that although the interest of the specimen was somewhat lessened by there being no history of the case during life (for it was found in a subject in the dissecting room, and in which also there was gangrene of the foot dependent upon embolic obstruction of the femoral artery), still he felt that the rarity of the specimen entitled it to the notice of the society. Professor Law observed that he felt a particular interest in this pathological condition, as he believed he was the first to explain the conditions and circumstances under which, he maintained, concentric hypertrophy of the left ventricle of the heart alone occurred, viz., *when there existed, at the same time, both disease of the mitral valve, producing contraction of the mitral orifice, and disease of the aortic valves.* These conditions were all present in the specimen exhibited; the mitral orifice was greatly contracted, so as hardly to allow the little finger to pass through; and the aortic valves were all so indurated and thickened, from interstitial deposit, that they both offered an obstruction to the passage of the blood from the ventricle, and also allowed that which had passed out to regurgitate into it. With this double valvular lesion Professor Law connected the contracted cavity and the thickened walls of the ventricle. He contrasted the condition of eccentric hypertrophy, the ordinary result of aortic valve disease, with that which he exhibited, affirming that the increased capacity of the ventricle in the one case, and its diminished capacity in the other, illustrated a law in the circulation—that the size of a vessel, whether a cavity of the heart or a blood vessel, is permanently affected by the quantity of blood which habitually passes

through it. He had already directed attention to the diminution of its size that the aorta undergoes in cases of contracted mitral orifice, in consequence of the small stream of blood which passes from the auricle into the ventricle, and from thence into the artery; the thickened state of the valves of the ventricle was produced by the efforts to overcome the hindrance presented to the exit of the blood, by the valves of the aorta being so altered as not to apply themselves so closely to the sides of the vessel, as to leave a free passage to this fluid, as wide as for its regurgitation into the ventricle. Both these causes contributed to produce this effect which was, in fact, a conservation process of nature, and which should be treated as such, as long as it confined itself within certain limits.

Professor Law remarked that before cardiac pathology was as well understood as it now was, when observations were less exact, concentric hypertrophy of the left ventricle of the heart was supposed to be a very common phenomenon; for *post mortem* examination had often discovered the cavity of the ventricle greatly contracted and its walls apparently much thickened. M. Cruveilhier, however, showed that the contracted cavity with the thickened walls was a mere transient contraction of the ventricle, which death had surprised in the energy of its contraction. This was especially observable in persons who had died a violent death, as by the guillotine or hemorrhage of any kind. And that this was a mere transient condition was farther proved by the fact, that the hand could dilate the contracted cavity and reduce the size of the apparently hypertrophied walls, which, of course, would not be the case if the condition were permanent. M. Cruveilhier denied the existence of concentric hypertrophy altogether, and most pathologists embraced his view. Dr. Watson remarks, "concentric hypertrophy never occurs, I believe, except as a congenital malformation." He seems to have adopted the views propounded by Dr. Budd on this subject, in the 23rd Vol. of the *Medico-Chirurgical Transactions*, when he limits the existence of *real* concentric hypertrophy to congenital malformation, and, according to his experience, most commonly in the right ventricle. Professor Law declared his experience to be at variance with that of Dr. Budd, for, that in all cases of congenital malformation connected with hypertrophy of the right ventricle that he had met with, it was always eccentric and not concentric hypertrophy. Nor did he believe that concentric hypertrophy of the right ventricle could occur, except under the same conditions on the right side of the heart that he thought were alone competent to produce it in the left ventricle, viz., a contracted auriculo-ventricular opening, and an obstructed arterial orifice. Professor Law felt he need hardly remark on the little likelihood of such a condition of parts being found in the right side of the heart; for although the auriculo-ventricular opening on this side might be contracted, which was comparatively rare,

still the other element of the complication which he deemed essential to the production of this form of hypertrophy, viz., a pathological condition of the valves of the pulmonary artery, analogous to that of the aortic valves, at the same time hindering the exit of the blood from the ventricle and admitting of its regurgitation, he believed to be so rare, that he questioned if the records of pathology furnished an undoubted instance where the complication was found to exist. The almost complete immunity of the valves of the pulmonary artery from disease, rendered its existence highly improbable. Professor Law observed, that it might be objected, that although the valve of the pulmonary artery might be free from disease, an obstruction to the circulation might exist in the lungs which might be expected equally to operate in producing hypertrophy of the right ventricle. He maintained that obstruction to the circulation through the lungs had not generally the effect of producing hypertrophy of the valves of the right ventricle; although the contrary had been asserted by systematic writers on cardiac pathology, who based their assertion more on what they thought ought to be than on what they had actually seen; conceiving, that as an obstruction in the course of the systemic circulation eventuated in hypertrophy of the left ventricle, so an obstruction in the course of the pulmonary circulation ought equally to eventuate in hypertrophy of the right ventricle. Professor Law denied the existence of an exact analogy between the two sides of the heart, under what were considered to be similar conditions, and attributed the difference of result to the difference of the blood on the two sides, that on the left stimulating the organ, while that on the right, being venous, wanted this stimulating property. Professor Law grounded his view on the fact, that always when a direct communication existed between the left and right sides of the heart, either through an imperfect septum ventriculorum or an open foramen ovale, hypertrophy of the right ventricle was found. This effect he attributed to the *error loci*, as it were, of the arterial blood, producing this *unusual* effect. Professor Law concluded his observations by remarking that there was such a pathological condition of the heart as concentric hypertrophy of the left ventricle—and this not a congenital malformation, but most commonly the result of a complication, consisting in a narrowing of the left auriculo-ventricular opening, and of such disease of the aortic valves as compromised their function. He added further, that he had never seen, nor could he believe, in the existence of concentric hypertrophy of the right ventricle under any other conditions than those under the influence of which hypertrophy of the left ventricle developed itself, which conditions, he believed, were seldom, *if ever*, found at the right side of the heart.—*February* 1*st*, 1862.

Tumour of the Dura Mater.—Dr. Banks presented a brain which had

been taken from a woman, aged 65 years, who had recently died in the Richmond Lunatic Asylum, where she had been an inmate for 22 years.

The cause of the woman's death was general dropsy; and in the course of her illness, which was protracted, there was no symptom referable to the cerebro-spinal system. She never, at any period, had an epileptic seizure nor any form of fit. The brain was remarkable for being extremely small. The dura mater was closely adherent to the cranium—a condition frequently observed in cases of chronic insanity. The adhesion in this case was so close as to render its removal a matter of much difficulty. From the inner surface of the dura mater, a tumour of the size of a filbert was found to have projected, and to have made for itself a bed in the fissure of the Sylvius. The tumour, which was fibro-cellular, had not contracted adhesions. The surface of the dura mater was studded with small bodies of the same structure.

Dr. Banks considered this case one of interest, and worthy of the notice of the Society, from the fact of its being one of very rare occurrence; in proof of which it may be noticed that Drs. Bucknill and Tuke, in their *Manual of Psychological Medicine*, state that they have only once found a true tumour of the dura mater. In their case the tumour pressed upon the pons, and the individual was epileptic.—*March* 1*st*, 1862.

Evulsion of the Thumb.—Mr. Tufnell exhibited the thumb of the left hand of a soldier of the Royal Scots' Greys, aged 28 years, with the tendons of the extensor and flexor muscles attached, the tendons having been dragged out until they separated at their muscular connexion. The accident occurred in the following manner:—A loose horse being in the barrack yard at Newbridge, the patient ran before him to prevent his passing out through the gate, standing with both hands and arms held out. The animal, as he darted by, made one snap at his hand, and, seizing the thumb in his teeth, amputated it in an oblique direction, through the metacarpal bone. Hardly a drop of blood escaped, and the line of incision was so regular, that nothing required to be done, but shorten the bone with nippers, and close in the edge of the wound by adhesive plaster. Cold lotions were laid over the arm, and the man rapidly recovered without the slightest ill consequence, beyond the loss of the member thus suddenly detached. The case occurred in the practice of Dr. Lockwood, surgeon of the Royal Scots' Greys.—*March* 8, 1862.

Poisoning by Morphia; Effects of Continuous Motion in Joints.—Mr. Tufnell exhibited the head of the left humerus and left shoulder joint of a man, who had committed suicide by taking a tablespoonful of the muriate of morphia, and who had been kept alive by artificial respiration (conducted according to Sylvester's method) for a period of 15 hours.

This plan, which consisted in elevating the arms above the head, and then bringing them down along the sides of the chest, had been perseveringly pursued for the time stated, with the aid of relays of assistants, and the movements had been made, as nearly as possible, at the rate of twenty times per minute. Both shoulder joints had been in continuous motion, therefore, to the extent of 18,000 times, and it was for the purpose of testing the condition of the synovial membrane, cartilage of incrustation, and surrounding ligamentous tissues and muscles, that Mr. Tufnell had removed the joint which he now laid before the Society; and for the opportunity of observing and obtaining which he was indebted to his friend Dr. Carey, surgeon of the 87th regiment, in whose corps the case occurred. It would be seen that the head of the humerus bore a deep blood-stained appearance, and the capsule of the joint was also vascular and tinged with colours. The synovial membrane was dry, and not the slightest amount of this secretion existed in the joint. Whether inflammation of the joints might have followed in this case, had the patient survived, Mr. Tufnell could not say; but, in instances of leakage in ships at sea, where the crew have had to work almost continuously at the pumps for as many hours as the limb was kept in motion here, no such result followed. The muscles surrounding the joint did not appear to have suffered in any way.—*March* 8, 1862.

Rupture of the Spleen.—Mr. Tyrrell presented to the Society a ruptured spleen which he had removed from the body of a sailor who died in Jervis-street Hospital. He was admitted on the Tuesday preceding, in consequence of a severe crush which he received from a heavy weight falling on him, while he was leaning over the bulwarks of his ship. The accident occurred at four o'clock P.M., and Mr. Tyrrell did not see him until ten, when he found him in a state of semi-collapse, cold and shivering, but conscious, and able to move himself in bed. Before he was admitted into hospital a catheter was introduced, and some blood drawn off. Mr. Tyrrell introduced a large-eyed full-sized catheter with the same result, but, after a little, some urine flowed, when the clots were removed from the eye of the instrument. He was ordered gallic acid in five grain doses, combined with half a grain of opium, in the form of pill; one to be taken every third hour. Heat to be applied to the extremities, and the catheter to be left in the bladder. On Wednesday the urine flowed copiously, and it was free from blood. He was altogether better; complained of but little pain, and that referred to the right side; but the abdomen was extensively ecchymosed, although, on admission, there was no appearance of bruise on any part of the body.

Thursday, his state was satisfactory; but on Friday morning he got suddenly very low, and died in the course of the day.

The autopsy was made on Saturday morning, and on cutting into the

abdomen extravasated blood was found on the right side, in the neighbourhood of the kidney, but there was very little blood effused on the left side, although the spleen was nearly torn across.

Mr. Tyrrell observed that the case was interesting, from the fact that there was very little hemorrhage, although the spleen was ruptured, nor was there any complaint made of pain in the left side. Had the man merely suffered from the lesion of the spleen he might have recovered. His death, no doubt, was due to the loss of blood from the ruptured right kidney. He likewise wished to draw attention to the fact, that there was no injury done to the bladder, and his reason was, because the surgeon who introduced the catheter before the patient's admission into hospital, on finding nothing but blood flow, concluded that the bladder was ruptured. However, as there was a well-defined tumour above the pubes, dull on percussion, Mr. Tyrrell was of opinion that the bladder was safe even before the flow of urine through the instrument confirmed his diagnosis.—*March* 15, 1862.

Cancer of the Jaw.—Dr. WHARTON exhibited a portion of the inferior maxilla of a man, aged 72, which he had recently removed, together with a portion of the integument of the chin, in consequence of cancroid disease, extending from the insertion of the masseter muscle on one side to a corresponding line on the opposite. On looking into the patient's mouth it was observed that the portion of the bone above referred to was more or less enveloped in a mass of disease, and that the floor of the mouth was similarly circumstanced, with this exception, that the gum was not ulcerated, but rather tuberculated. The tongue was displaced considerably backwards, in consequence of the destruction of the frenum by ulceration. A distinct ulcer, which occupied this situation, frequently bled, and the patient's breath was peculiarly fetid; articulation was very indistinct, similar to what occurs when a person attempts to speak while at the same time he holds his tongue with his finger and thumb. The operation was commenced by making an incision along the base of the jaw, according to the limits above specified. The integuments above the line of incision were dissected upwards, so as to expose the anterior surface of the maxilla, while those situate below were, at the extremities of the line of incision, dissected round the base and internal surface of the bone, so as to admit of the introduction of the blade of Butcher's saw into the cavity of the mouth. This having been effected, the blade was secured in the frame, and the bone sawn from within. The bone having been excised, the remaining attachments were severed, and the bone removed. The floor of the mouth was next denuded of all traces of disease, and a considerable portion of the integuments of the chin, commencing a few lines below the lower lip, and terminating at the extremities of the first incision, were removed.

Dr. Wharton also exhibited a specimen of epithelioma of the lip, which he had lately excised from a man in his 80th year.—*March* 15, 1862.

Ovarian Tumour; Ovariotomy.—Dr. Kidd exhibited an ovarian cyst which he had removed from a patient in the Coombe Lying-in Hospital, on the 20th March. The woman from whom it was removed was aged 32, she had menstruated regularly, and enjoyed good health. She was married in June, 1857, and in August, 1858, gave birth to her first and only child. She nursed this child for 14 months, and weaned it in November, 1859; her health up till this period being good. She now began to experience pain during sexual intercourse, and soon perceived "a small hard lump" in her right side, but as it caused her no apparent inconvenience she did not trouble herself about it. Her general health continued tolerably good till the 14th August, 1861, when she was seized with excruciating pain after connexion, which continued, with constantly recurring paroxysms, for some days; it then ceased for about a week, and returned with violence. She referred the chief seat of pain to a position near the mesial line, a little above the pubis. About this time the "small hard lump" began to enlarge rapidly.

She was admitted into the Coombe Lying-in Hospital on the 10th of March. She suffered much, since the tumour began to enlarge, from sickness of stomach. This sickness had much the character of the morning sickness of pregnancy; there was no diarrhea with it, or other evidence of mucous irritation. The tumour was so large as to interfere with respiration, and to prevent her lying down comfortably. The abdomen was very tense; fluctuation very evident, except at the lower part, where there was some solid matter. It was evident that the walls of the abdomen and of the tumour were very thin to allow of the fluctuation being so easily felt. At the upper and left side a fold of omentum could be distinguished lying between the tumour and the abdominal wall, and by pressure and manipulation could be displaced. The surface of the abdomen was irregular, being most prominent at the right side; it was uniformly dull on percussion anteriorly, and clear in the lumbar regions. The uterus was low in the pelvis, and measured with the sound was found to be of the natural size.

The diagnosis formed was, that there was an ovarian tumour of the right side, with its contents chiefly fluid, with some solid matter at the base, and, from the history of the case, probably numerous adhesions.

On full consideration it was determined to remove the tumour, but it was felt that the case was not a favourable one, from the fact of the adhesions and the emaciated state of the patient. The circumstances were explained to herself and her friends, and on the 20th March, Dr. Kidd proceeded to perform the operation.

The usual preparations having been made, she was placed under the

influence of chloroform in the recumbent posture, and in a heated room; an incision five inches long was made, commencing below the umbilicus; as soon as the abdominal walls were divided the cyst, unable to sustain the pressure of the fluid, ruptured, and about three gallons of purulent matter escaped, necessitating the stopping of the operation till the cyst had emptied itself. It was now found that the tumour was universally adherent to the abdominal wall, all through the pelvis, in two places to intestine, and in one to the omentum. Where adherent to the intestine a portion was cut out of the wall of the cyst and left adhering; the other adhesions were broken down with the hand with much difficulty—those in the pelvis requiring extreme caution; the others more easily. The pedicle was secured with a clamp; then ligatured with indian hemp, and the clamp removed; the wound was closed with hare-lip pins and wire sutures, the stump being fastened in the wound; a flannel bandage and compress applied, and the patient placed in bed. There was considerable collapse, from which, under the influence of stimulants and opium she soon rallied and became cheerful.

Twelve hours after the operation she began to complain of pain in the abdomen. At the end of 15 hours the respiration began to be hurried; the abdomen began to swell and get tympanitic; hiccough and vomiting set in, and she died 23 hours after the operation, evidently from peritonitis, but, unfortunately, the friends would not permit an examination.

The tumour consisted of one large cyst with smaller ones growing from its internal surface; near the pedicle there was a mass of small cysts intermingled with tubercular matter.

Dr. Kidd said he thought it right, for the true history of the operation, that this case, though terminating unfortunately, should be placed on record. It was, he said, only the third time the operation had ever been performed in Ireland. The first was in a case of his in which Dr. Clay, of Manchester, had operated, in which there were no adhesions, and the patient died within 23 hours. The second was Dr. Gordon's case, in which there were adhesions to a slight extent, and also fatal. The tumours in each of these cases had been exhibited to the Society; and, though the cases had been unfortunate, this should not deter from the operation, as the history in this respect differed little from that of other capital operations.—*April* 12, 1862.

Cirrhosis of the Liver.—Dr. Kidd presented a liver in an advanced stage of cirrhosis which he had removed from the body of a woman, aged 36, who had died in the Coombe Lying-in Hospital, on the 28th March. She was admitted into the hospital on the 25th, complaining much of inability to pass water; but on introducing the catheter there was none in the bladder. She stated that she was about five months

pregnant. She had general anasarca of the lower extremities; and there was great effusion into the peritoneal cavity. Three hours after admission she was delivered of a five months' child. There was no hemorrhage; the effusion into the abdomen now increased. Next day she was deeply jaundiced, of a dark olive colour; the kidneys were now acting freely; the urine being loaded with bile; coma soon set in, and she died on the third day after delivery, having been perfectly comatose for several hours. Dr. Kidd said he thought the case worthy of being brought forward, for three reasons;—1st. The greatly cirrhosed liver in a woman who never took spirits of any kind. 2nd. The occurrence of pregnancy with a liver in such a state. 3rd. The absence of convulsions notwithstanding the presence of such extreme cholemia, which Braun lays down as one of the causes of puerperal convulsions.—*April* 19, 1862.

Tubercles in the Brain.—Dr. Robert M'Donnell brought before the Society the brain of an individual who had been the subject of very rapid and general development of tubercle within the chest, abdomen, and cranial cavity.

The following was the history of the case:—

Thomas Grady, aged 17 years, was received into the Mountjoy Convict Prison, January 24th, 1862. When inspected on his reception he made no complaint of illness, and although of a scrofulous aspect, bore upon him no outward marks of having suffered from scrofulous disease; an obstinately constipated state of the bowels, which was relieved from time to time by castor oil, was all that he complained of, up to the 20th of February, when he was admitted to hospital on account of pleuritis on the right side of the chest. On examination it appeared that effusion had taken place into the right pleural cavity, which, however, seemed to be localized in the lower part by old adhesions. His pulse was very quick (120 to 140) and weak; his tongue furred; he had, for two days, constant vomiting, and afterwards had, irregularly, attacks of diarrhea, which he attributed to the use of cod liver oil, and bark and iodide of potassium, which were ordered for him after his fever had in some degree subsided. He so far improved as to be able to sleep comfortably on either side, and he was strong enough to leave his bed and go into the open air during the mild weather in the early part of March. His appetite, however, did not improve; he lived chiefly on an egg beaten up with milk and his allowance of wine. He lost flesh; became weaker; his cough became worse; his pulse was rapid and feeble. He made no complaint (except of the cough) until 48 hours before his death, when the sickness of stomach returned, and he suffered from intense headache. He referred the pain to the forehead; he was at no time delirious. He sank rather suddenly at last, on the 15th of this month (April).

Autopsy.—On opening the chest the traces of extensive pleuritis of the

right side were discovered; the pulmonary and costal pleuræ were adherent almost throughout, save at the lower part externally, where about a pint of serum still remained unabsorbed. In both lungs there was extensive development of tubercle not as yet anywhere softened. There was no effusion of fluid into the abdomen, but all the viscera of this cavity were richly studded over with tubercles; tubercles also existed in the liver abundantly, in the kidney sparingly, while one solitary mass was found in the spleen.

The brain, which was exhibited to the Society, contained in its substance about five-and-twenty distinct tubercular masses; some of these could be felt on the surface, but most of them were embedded in the grey substance of the hemispheres. They varied in size from a pea to a filbert, and some of those on the surface could be seen to have coalesced and *softened*. There were none discoverable in the cerebellum, pons, or indeed anywhere about the base of the brain.—*April* 26, 1862.

Thoracic Aneurism.—Dr. J. F. Duncan exhibited a specimen of this disease which presented some points of interest. The preparation was taken from the body of a woman, who had been a patient in the Adelaide Hospital, and who had died suddenly, but quietly, on the preceding Wednesday morning. The night nurse had seen her alive at five o'clock that morning, and in an hour afterwards she was discovered by her fellow patients to be dead.

She was admitted into the Hospital on the 29th March, 1862, under the care of his colleague, Dr. Barton, who, on discovering the nature of her malady, transferred her to the medical ward. The history she gave of herself was as follows:—She was a married woman, 37 years of age, the mother of a family, and had been uniformly healthy, having never had a day's illness, except from her confinements, and she had never met with any accident. She could not account for her disease in any way. In September, 1861, she was suddenly seized with a sharp pain under her left breast, which darted round her back, up between her shoulders, and along the left side of her neck to the top of her head, finally settling down in the back of the left shoulder, where it has remained ever since. At first it was so severe as to interfere with free breathing, and prevented her lying on that side. She was not otherwise unwell. On the first of January she suddenly lost her voice, which became low and whispering.

On her admission she was somewhat emaciated, but presented the appearance of a woman who had lived a regular and temperate life. Her complexion was pale, her general health good, and there was no cough. Her aspect presented no indication of anxiety or even suffering.

Immediately beneath the sternal end of the clavicle, a slight prominence of the parts was observable, with a distinct and forcible impulse, greater in amount than the impulse of the heart in its proper position. This

impulse was heaving, rythmical in its character, and limited to a space of about two inches in diameter. Corresponding to the seat of the impulse, there was dulness on percussion for about an inch-and-half to the left of the left margin of the sternum, and two inches in vertical extent downwards below the clavicle. In this spot, also, there was audible a thumping sort of double sound, extremely like the natural sounds of the heart, but totally destitute of any bellows murmur. The auscultatory phenomena remained unchanged all through the progress of the case. The symptoms she presented were, first, the whispering voice, emanating evidently low down in the throat, having something of a stridulous character, and dysphagia, which was marked by this peculiarity, that she could swallow solids without difficulty; but when she attempted to take a second sup of any fluid, she had to stop. Dr. Duncan attributed this symptom to spasm of the œsophagus, the result of reflex action of the pneumogastric, the consequence of irritation from stretching over the aneurism, and not to direct mechanical pressure, the ordinary cause of dysphagia. She had no dyspnea, nor acceleration of the respiration; no hemoptoe, and the cardiac sounds and impulse were all perfectly healthy. There was obvious feebleness of respiration in the left lung, and some difference in the radial pulses, that on the left side being the smaller of the two; this difference was much more marked in attempting to compress the artery. She complained of pain in the seat of the tumour; this pain was of the double kind, one being dull and constant, and the other occasional only, but sharp and excruciating. She was unable to lie on her left side. She further complained of a sense of numbness and coldness stretching up the left side of the neck. Before proceeding to notice the changes subsequently observable, Dr. Duncan thought it right to allude to the treatment, which consisted of the direct application of refrigerating lotions to the tumour, and of the internal administration, first of alum in 5 grain doses, and subsequently of quinine in combination with digitatlis. This treatment, which was originally recommended by Dr. O'Bryen, of Bristol, who has detailed the particulars of a case terminating successfully under its use, in the 24th vol. of the original series of the *Dublin Medical Journal*, Dr. Duncan thought deserving of more attention than is generally bestowed on it. Many years ago, Dr. Duncan had a case of undoubted aneurism of the ascending portion of the arch of the aorta, in which the physical signs disappeared under the use of these remedies, the patient dying subsequently of another disease; but owing to the distance at which he lived from town, the opportunity of verifying the diagnosis was lost.

In the present instance the patient experienced the greatest relief from the treatment, simple as it was. Whenever the cold was suspended for any lengthened period, her sufferings recurred, so that there could be no hesitation in referring the benefit particularly to the local application.

The improvement consisted in the alleviation of pain, the subsidence of the external tumour, the diminution in the force of the impulse, her voice becoming louder and clearer, and the dysphagia entirely disappearing.

Notwithstanding the obvious change in the signs and symptoms, indicating a very material amendment in the patient's condition, Dr. Duncan was not satisfied that there was really any improvement in the aneurism, and explained to the students in attendance, that the changes indicated were all consistent with the idea that the tumour, enlarging in a different direction, might cease to press in the situation where it was most prominent at first. In a short time there was distinct evidence of the truth of this conjecture. The dulness increased over a larger space downwards, the difference in the force of the radial pulse became more manifest, and the respiratory murmur ceased entirely to be audible in the upper part of the left lung, both anteriorly and posteriorly.

The *post mortem* examination was made five hours after death. Some effusion of serum was found in the left pleura. The whole of the left lung was condensed and carnified. It had lost the crepitating feel of healthy lung, but it did not exhibit any trace of inflammatory consolidation. In volume it was smaller than natural. The pericardium was distended by effused coagulated blood, resembling black currant jelly in appearance and consistence. The quantity would be about four fluid ounces. The heart was reduced in volume to its smallest possible dimensions, obviously from the pressure of the effusion contained in the pericardium. The aneurism itself occupied two-thirds of the transverse and the commencement of the descending portion of the arch of the aorta. It was very large, being capable of containing a large orange, rough, and deeply marked with bands internally, and filled with a firm fibrinous coagulum. The left pneumogastric nerve passed obliquely across the front of it, and was firmly adherent to it. The recurrent branch could be traced at its point of departure from the pneumogastric, but was soon lost in the mass, as it passed up posteriorly. The origin of the innominata was free, but both the left carotid and subclavian were involved in the disease. The anterior and right side of the tumour had become adherent to the pericardium, and at the upper part of this membrane the fatal rent took place; it was small and narrow.

The case appears to present some features of interest well worthy of careful observation. The impossibility of accounting for the disease, either by accident or by the habits of the patient; the absence of bellows murmur during the entire period she was under observation; the spasmodic dysphagia, the benefit she derived from the treatment, and the existence of well-marked layers of coagulated fibrin, are all points upon which attention will be arrested. How far the occurrence of the latter may have depended upon the treatment, is a question with respect to which differences of opinion may be entertained; but if not the direct

result of the remedies employed, the coincidence of their development with this peculiar treatment should not be overlooked.—*April* 26, 1862.

Total Inversion of the Uterus, with complete Procidentia, and a Polypus growing from the Fundus.—Dr. M'Clintock exhibited a coloured drawing of this case. The patient was an unmarried woman, aged 66 years, who had been admitted to one of the chronic wards of the Lying-in-Hospital, 1st April, 1862. There had been no symptoms whatever of uterine disease till six weeks previously, when this large tumour, altogether measuring nearly seven inches in length, suddenly extruded from the vagina during a fit of vomiting. The free extremity of this tumour was formed by a polypus, of the fibrous kind, about the size of a horse-chestnut, and growing from the fundus of the womb. Next to this was the inverted uterus, having the orifices of the Fallopian tubes quite discernable. Continuous with this was the everted vagina, which constituted the first three inches of the tumour, proceeding from the pelvis. All these parts were shown in Mr. Conolly's drawing. When the tumour first descended, some hemorrhage took place, but none of any consequence since. Dr. Denham, Master of the Hospital, removed the polypus by meaus of the ècraseur, and it is now exhibited to the Society. A very smart hemorrhage ensued, the bleeding coming from three arterial branches. Pressure had to be kept up for some hours to control this bleeding, as the ordinary styptic applications, including a strong solution of perchloride of iron in glycerine, had no effect upon it. The extirpation of the uterus being resolved on, Dr. M'Clintock, who now had charge of the Hospital in the absence of Dr. Denham, effected this in the same manner as in the case formerly submitted to the Society, viz., by the combined employment of the ligature and the ècraseur. Accordingly, on 21st April, he applied a whip-cord ligature with Levret's canula, and left it on, occasionally tightening it, for three days. At the end of this period, the ligature, which had cut only a very short distance into the tumour, was removed, and the chain of the ècraseur substituted. During the action of the instrument, which was worked very slowly, the patient experienced much pain, and showed some symptoms approaching to faintness. However, she underwent the operation without shrinking. Stimulants were freely administered, and at the close she got a dose of opium. No unpleasant symptoms ensued, and the woman has made a perfect recovery. The extirpated uterus was exhibited before the Society. It was about the size of an orange, and in the pouch of peritoneum, were the remains of the broad ligaments and Fallopian tubes. Through each of the latter a probe had been passed.—*April* 26, 1862. See a fuller account at page 213.

Acephalous Fetus.—Dr. MacSwiney presented a specimen of a fetus

which, in consequence of the singular defect in organization which it exhibited, was calculated to afford much interest, although such specimens were not at all uncommon. It illustrated a curious arrest of development which was designated the acephalous condition. Its history was as follows:—the female who gave birth to the child had carried it for the full period, and it had been noticed that her enlargement was much greater than usual with pregnant women at the end of gestation, so much so, indeed, that a suspicion that she was carrying twins was excited. Her labour was unsatisfactory in character—it was tedious, and the pains were unequal and inoperative. The os dilated very slowly, and no presentation could be made out. For, in making a vaginal examination during the progress of labour, nothing could be reached by the finger but a soft, elastic tumour, which was the bag of the membranes, containing the liquor amnii. That was a state of things which gave rise to much anxiety as to the part which might, ultimately, present; and after labour had continued for about thirty-six hours, it became necessary, from the condition of the patient, to rupture the membranes, when—after the escape of the waters in a manner presently to be alluded to, the pelvic extremity presented, and he delivered by the feet and breech, what he thought, as he was extracting it, would prove to be a fine healthy child. Just as he had completed its delivery, however, he found that it had no head, but that it was alive.

The child lived for fully five minutes—that is, the cord pulsated, and the heart could be heard and felt beating strongly during this time, but it did not move, and not one respiratory effort was made; and on examining the lungs, subsequently, they were found to sink in water, a circumstance which would be held by many to denote still-birth. In a medico-legal point of view that fact was of considerable importance, as a difference of opinion would appear to exist still, as to whether the circulation of the blood alone is enough to constitute legal evidence of live birth.

In a trial which recently took place in England the question, he believed, arose as to whether a child could be said to have been born alive when there had been no respiration, although the circulation might have gone on for a time. Now in the case Dr. MacS. was relating, the child was undoubtedly alive (physiologically), and the case went to dispel the view of some who held that to constitute live birth, it was necessary that respiration should be set up.

Dr. MacS. said, that in the case which he now brought to the notice of the Society, there was a remarkable occurrence when the membranes had been ruptured, namely, an enormous gush of the waters, which made a loud sound in rushing out, and which filled two wash-hand basins hastily brought by the nurse to receive the fluid, which, in addition, deluged the bed and floor. He did not divide the cord until the circulation had ceased. There was no cranium, no occipital, or other bones of the head,

except the frontal, and an osseous mass at either side, which looked like the petrous portion of the temporal bone. There was no cranial cavity. The lower extremities were remarkably well developed, and one of the students present at the examination made the pertinent remark, that that might be accounted for by the fact that the blood went to the lower extremities in a greater quantity than in a normal fetus, as there was here no brain requiring to be nourished.

The body was perfectly well formed, too, in all other respects. The testes were found not to have as yet descended into the scrotum, but they had left their situation near the kidneys, and had arrived at the internal abdominal ring, so that there was no other malformation or arrest in this case, save only the one detailed.

Dr. MacSwiney explained the views of Professor Rudolfi, of Berlin, respecting the mode of origin of these monsters. He regards the imperfection as being due to the setting-up of an intra-uterine hydrocephalic inflammation, and has preserved various specimens of the fetus at different periods of its intra-uterine life, which seem to entirely confirm this view.

An enormous accumulation of the amniotic fluid, such as had occurred in this instance, would appear to be general in these cases, as many observers have reported the same thing, so that we may reasonably conclude that there is some fixed relation between the increased quantity of fluid and the embryonic hydrocephalus.

Dr. MacSwiney also exhibited a dry specimen of a similar arrest of development.

PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.[a]

TWENTY-FOURTH ANNUAL SESSION, 1861-62.

Seventh Meeting, 14th June, 1862.

Dr. Beatty, in the Chair.

Dr. Macswiney read the following cases of *Puerperal Fever*.

I.—On March 20th, '62, I was called upon to visit Mrs. M'D., aged about 25 years, the wife of a cabman, living at 21, Mercer-street, who was reported to me as being ill for the last six days of lying-in fever.

Upon visiting her, I found her *history* to be as follows:—She had been confined of her second child on the 13th instant, after an easy and natural labour of three hours' duration. The next day she got a shivering

[a] These reports are supplied by Dr. Geo. H. Kidd, Secretary to the Society.

fit, and felt ill and weak; she was hot, and suffered from headache, with loss of sleep and appetite; she had a "bad taste" in her mouth, and was very thirsty. She remained in this state, I am told, for some four or five days, feeling very sick, and taking no food, only drinks. Two days ago she was attacked with diarrhea, and also vomited a couple of times. She had felt slight abdominal pain from the first day after her confinement, but did not attach much importance to it. These were the only details I could procure.

Present State (March 20th)—She has a worn, pinched, and anxious look; she lies for the most part on her back, but is able, with some difficulty to turn upon either side; her tongue is dry and rough, and is thickly covered with a brown coating; she is extremely thirsty; her pulse is small and feeble, and beats 140 in the minute; she has diarrhea; the bowel discharge is whitish-yellow in colour, and of about the consistence of stirabout, she passed it involuntarily in the bed; she complains of being very weak, and describes a painful sensation experienced by her about the abdomen and pelvis; there is, however, no marked tenderness on pressure, over any part of the abdomen, and the uterus appears, upon examination, to be but moderately well contracted; there is not a drop of milk in the mammæ, and the lochial discharge, which is said to have been present for two days after her confinement, is now entirely absent; her breathing is rather hurried, and she suffers occasionally from slight attacks of cough, during which some milky-looking frothy mucus is brought up.

21st.—The diarrhea continues, the bowel discharge being very thin, of an ochre colour, and passed involuntarily in the bed; the abdomen is somewhat distended with flatus; it is slightly sensitive to the touch and pressure, but by no means what one might call painful; the pulse is 140; the tongue is somewhat cleaner than yesterday; she has great thirst for cold drinks; her breathing is rather more short and oppressed than it was on last visit, and she coughs now a good deal, the irritation causing the cough seemingly arising from a thick, creamy, frothy saliva, which appears to collect at the back of the pharynx, and which she is obliged to make frequent efforts to bring up; she has slept but little last night, and what sleep she had was disturbed and unrefreshing; she is much weaker than before, to day, but expresses herself in a very sanguine manner as to her ultimate recovery.

22nd.—She seems worse and weaker to-day; she is flushed; her breathing is more oppressed, and her cough more troublesome; her attacks of diarrhea continue, but are, perhaps, a shade less urgent; the discharge is somewhat green in colour now, and quite as liquid as before; her pulse is 140, weak and fluttering; her respirations are 34 in the minute; she complains that she has a confused feel in her head, and that her memory is quite failing her; she has no pain, but is greatly prostrated,

and has a most collapsed and anxious look; and, on the whole, her state is one of a very alarming and almost hopeless character.

23rd.—The diarrhea is somewhat controlled by the remedies to-day, and the oppression of breathing is not quite so great as it was on yesterday, but the prostration remains as great as before, and the fever continues unabated; although the oppression of breathing is a shade better, the number of respirations in the minute is slightly increased, being now 36; and the pulse is fully at, if not above, 140 in the minute. The brown coating has cleared considerably off the tongue, and that organ is now of a deep dark red colour, showing many enlarged papillæ scattered over its surface. She had some sleep last night, and feels rather better to day; bed sores, however, have formed upon her back, and over the right hip joint, and the tympanitis has increased considerably.

For the following five days she remained in pretty much the same state of extreme danger as she was in on the 23rd, the only remarks necessary to make respecting her condition in this interval are:—that the diarrhea was considerably checked, but not arrested; that the weakness and prostration were extreme; that the tympanitic enlargement of the abdomen was greatly augmented, and the bed sores considerably increased in extent and painfulness; the pulse and respirations remained as high as before, and she frequently presented the appearance of being in a moribund state.

29th.—On visiting her to day, she seemed to have rallied considerably; she had been able to take and enjoy some nourishment, and had slept rather well; all traces of fever seemed to have disappeared, and the only enemy I could recognize, against which she would have to contend in her struggle for life, was debility. I made every effort I could to aid her in this unequal contest with death—but in vain, she died, worn out, on the 5th day of April, being 22 days after her confinement.

II.—Mrs. S. of —— street, a primipara, was seized with the pains of labour, at 6 o'clock A.M., March ——. I saw her in the course of the day, and ascertained that *the feet* presented. She was a stout, leucophlegmatic lady, of large, but flabby and relaxed fibre, and her labour was slow and unsatisfactory, Late in the evening, as she was not making progress, and some symptoms of an unfavourable kind had set in, she was seen by Dr. Churchill. No instrumental aid seemed called for, however, and finally she was delivered of a dead fetus, without my being obliged to have recourse to further operative interference, than was included in my aiding the efforts of nature, by supporting and extracting the extremities and breech.

Next day the report I received from the nurse was, that she had passed a tolerably quiet night, had slept for a couple of hours, and had passed

water; she looked pale and feeble, and her pulse was fast, quick, and weak.

Twenty-four hours after the birth of the child, this lady complained of *feeling extremely cold*, and experienced a chill creeping sensation in the course of the spine; she called for additional bed-cover, and had a hot drink.

Next day her pulse was 120; her tongue was coloured yellow; she had not slept well, and she complained of *colic*, which had been relieved by the application of very warm fomentations. Everything that could suggest itself to my mind, as calculated to arrest the progress of the insidious disease, which it was too plain had seized upon her, was had recourse to, and I gave her wine, brandy, and animal jellies liberally, but in vain; she kept losing ground, without any very prominent symptoms, save quick, weak pulse, and great muscular prostration, together with uneasiness in, and tympanitic swelling of the abdomen.

On the morning of the *seventh* day after she had been confined, *diarrhea* set in. Dr. Sawyer now saw her with me, but nothing could be done to save her, and she died that evening.

III.—At 1 o'clock, A.M., January 27, 1862, I was called upon to attend Mrs. R., of G.-st., who had been in labour for some two hours. It was her fifth confinement. Her health had been very indifferent during the last twelve months; she had wasted; had palpitation; her appetite was not good, and her strength had been considerably reduced. For two months before her labour came on she had not left the house; she could not walk, she said, and she suffered from a dragging, distressing weight and pain in the pelvic region, which every movement increased. Her pulse, when I saw her, was weak, and her voice was low and feeble.

Her labour progressed but slowly; the pains came on at regular intervals, but were not powerful or effective. After some time I was made aware, upon examination, that the anterior lip of the os uteri became caught, at each expulsive pain, between the head, which presented, and the pubis. I used the utmost efforts, assiduously but carefully persevered in, to cause it to remain up. I reduced it, so to speak, very many times, and kept a finger so placed as to prevent its descent, but with no permanent avail; it always redescended the next pain which came on after I removed my hand. And, after a couple of hours, the lip became very much engorged and enlarged, and the resistance to my finger, as I endeavoured to keep it over the head during a pain, was so considerable that I was apprehensive of doing mischief by such sustained exertions in that direction. Presently the lady began to become impatient and uneasy about herself; she complained of great and quite unusual pain in the back, hip and thighs, and her strength was failing. Some bloody discharge, too, from the vagina, now made its

appearance; the enlarged lip had assumed all the characters of a thrombus, and the most cautious effort to return it was followed by some bleeding. I regarded her situation at this time as critical; her pulse was beginning to flag, and exhaustion was setting in; the hemorrhage which had already taken place, warned me that a more alarming bleeding might at any time occur. Moreover, should this thrombus burst, I could not but consider that the occurrence would be, to all practical intents and purposes, a rupture of the uterus; which the succeeding expulsive efforts might, now that the first rent would have been made, have carried up through the body of the organ. I determined, therefore, to deliver by the forceps. At this time Dr. Denham was associated with me in consultation; and after he had made a careful examination, he gave me his unqualified sanction for immediate instrumental delivery. Accordingly, I applied the long forceps, and delivered her, without any difficulty, of a living child. The placenta came away satisfactorily ten minutes after the birth of the child.

I observed, before leaving her, that the uterus had not contracted to the extent that would have been desirable. I used all proper means to stimulate its contraction; I placed a pad over the organ under a carefully applied binder, and I gave her a stimulant draught. There were no threatenings, whatsoever, of hemorrhage; but the uterus felt large and flabby under the hand. The following diary contains a statement of her condition during the ensuing few days:—

28th.—Has had a little sleep, but does not feel refreshed; and has an uneasy, rather tender, sensation over lower part of abdomen when pressure is made. The uterus remains enlarged to a greater extent than is usual, twelve hours after delivery. Her pulse is 100; tongue clean; no thirst; no desire for food.

29th.—The report is, that she spent a sleepless night, and had a shivering fit, which obliged her to have additional bedclothes put over her. Her pulse is 120. The lochia are scanty, and but a few drops of milk are secreted in the mammæ. Her tongue is clean, however; her bowels have been opened by an aperient draught, and she has no severe pain anywhere. Her head is slightly disturbed, the distress scarcely amounting to pain, and she is rather restless and fidgetty.

30th.—She complains to-day of great headache; her back, too, has been paining her through the night; she had not much sleep, and is depressed and anxious about her state. Her pulse is now 130. Her tongue is becoming covered with a creamy-like coating; and she suffers a good deal from pain and uneasiness in the inguinal and iliac regions. There is, however, no swelling, or tenderness upon pressure, along the course of the femoral vein. Her limbs are usually kept extended; and pressure made over the uterus, which is large and flabby, causes no exquisite pain at all, but only an uneasy and distressing sensation.

There is a good deal of flatus in the intestines; the urine is scanty and high coloured. No appetite; thirst rather urgent.

31st.—Passed a bad night; had some sleep, procured by an opiate, during which she tossed about and raved. Her pulse is up to 136. Tongue covered with a white coat; thirst considerable. Back very uneasy; has to be turned in the bed now; bowels regular. No milk in mammæ. Lochial discharge absent. Bowels distended with flatus.

Feb. 1st.—The abdomen very much enlarged from tympanitis; and the distress consequent upon this state very considerable. The pulse remains at 136, and the tongue is thickly coated. She complains very much of her back, and indicates the sacrum as the situation of this distress. Has no sleep except what has been procured by sedatives, and *that* is disturbed and unsatisfactory. No vomiting; bowels rather constipated.

It would subserve no useful purpose to further detail the daily report in this case, one day's was so like the other in all important particulars. So I will merely remark that from this date to the 10th of February, the symptoms remained very much the same. The fever continued in full force. Pulse 136, or over; skin hot; head aching; abdomen and back disturbed and painful; secretions perverted; thirst, sleeplessness and coated tongue. Still she never became alarmingly weak; the powers of life never fell very low; she was able to take the animal jellies and other sustainers of strength prescribed for her; and her whole state conveyed the impression to me that she would struggle through the disease. But up to the 15th day of her illness her pulse never fell one beat, remaining for the greater part of that time at, or even over 136. Her head continued to pain her, and the flatulent distension of the stomach and intestines remained; whilst the uterus never returned to the same state of contraction it might be expected, in a healthy person, to have reached at this period.

After the 15th day, however, the general fever subsided; her tongue became clean, and the thirst, which had so tortured her, was no longer present. But a most annoying attack now came on, affecting the perineal region generally, and principally referred to the space between the anus and coccyx. She had heat and pain in this part; it caused her great pain to have the bowels opened; and, upon examination, the parts were found swollen and red. Upon making pressure, I found that pus passed out of the anus; in fact an abscess had formed in the recto-coccygeal space, and had opened internally. The progress of this abscess was tedious and troublesome; it interfered considerably with her convalescence. A fistulous opening formed externally, which communicated with the internal orifice; and, finally, I cut through the sphincter, as in the operation for fistula in ano, and she is now nearly cured of this affection, and otherwise in perfectly good health.

IV.—Mrs. M'D., Wicklow-street, aged 25 years, was seized with the pains of labour, in her first confinement, on March 2nd, 1862. She was naturally a somewhat delicate young woman; but had not been particularly an invalid during her pregnancy. Her labour was rather tedious, the *os* being somewhat slow in dilating, and the head, which presented, being detained at the outlet for three quarters of an hour longer than could have been expected from its being, apparently, so nearly at the point of actual delivery. But her strength seemed to have been a good deal expended at this time; the pains were not either very strong nor very effective; and, finally, when delivery took place, she was much exhausted. No instrumental aid was had recourse to. The child, a female, was born alive, and healthy; and the placenta was soon and naturally cast off. Ten hours after the birth of the child she was rather hot and had not slept, but in other respects felt quite well. The pulse was fast, but I did not count it. I saw her a second time on the evening of March 3rd (the first day after her confinement) and ascertained that she was suffering from very severe headache, heat, and restlessness. She also had thirst and quick pulse. I gave her an opiate, directed some cooling, demulcent drink, and an aperient draught for the morning. She described a "chill," something very much resembling a *rigor*, as having occurred in the evening, about 20 hours after delivery. I gave the necessary directions as to her treatment, and prescribed an aperient.

March 4.—On visiting her this day the report I received was that she had not slept through the night, but had been hot and restless; with thirst and dry skin. The opening medicine had acted well, and she felt relieved therefrom. Her head was not paining her quite as much now, but still it ached. Her pulse was 120; her tongue coated and yellowish in colour; the lochia were scanty, and there was no milk in the mammæ. The uterus was scarcely sufficiently contracted, and there was an obscure tenderness over, and in the immediate neighbourhood of it, which was perhaps rather more acutely felt when pressure was made than is natural at the same period; but the distress was by no means severe; was not complained of unless attention were directed to it and the part was subjected to pressure. Her decubitus was on the back, or on either side indifferently; her countenance was not anxious, but she complained of being very thirsty, and of having acid in the stomach.

5th.—Spent a bad night; has had little or no sleep; her thirst has been excessive, and she has suffered a good deal from dry heat of skin. Her tongue is coated yellow, and is clammy; her head continues to ache badly, and she has pain in the lumbar region—felt even when she is quite at rest. She has not the least desire for food. Her pulse is 130, rather small and hard. No increase of abdominal tenderness, nor is there any pain experienced when pressure is made along the course of the femoral vein, or in the iliac region. The bowels have acted twice since

yesterday, but there is no diarrhea. The renal secretion is stated by the nurse to be passed in normal quantity. The abdomen somewhat swollen and tympanitic. She complained that her left arm pained acutely when she moved it.

6th.—She had a few hours sleep, from an opiate on yesterday evening; but was quite as wakeful as on previous occasions through the night. The thirst and headache were complained of quite as much as they before had been; pulse 136; intellect quite undisturbed; strength impaired; no appetite. She has no vomiting, and does not complain of nausea.

Both arms were now painful—it distressed her to move them—but they were not swollen nor red, that I could detect. She never had had rheumatism, nor pains of any kind in her bones previously. She was evidently losing strength. She could not turn in bed without assistance, and dark areolæ were beginning to form around the eyes.

7th.—Her state to-day was not materially altered from that in which I have described her as having been on yesterday. Her pulse was 136; rather weak, but without intermission or decided feebleness. Her tongue was dry, with a light brownish-white coating on it. She had vomited a greenish, glairy fluid three or four times, and her stomach did not so easily tolerate the remedies or nourishment as before. The sleeplessness was as great as ever; she did not obtain any sleep except from an opiate, and but little even from that. The tympanitis had increased. The mammæ were flaccid, not a drop of milk having, apparently, been secreted in them. The lochial discharge was entirely absent. She was not in acute pain; her reason was unclouded; and she was quiet, and hopeful of recovery.

8th.—She had unmistakeably lost ground; her strength was much diminished; her voice was much more feeble; and she was unwilling to be moved. She continued to complain of her head, and of the thirst. Her pulse was still 136; and the tympanitis had increased. She had some slight cough, and was hoarse, and thought she had somehow caught cold. Her stomach was again at rest, and she was able to take her remedies. But the bowels had completely given way; the sphincter was relaxed, and she passed the feces involuntarily, and she was wretchedly weak. Her knees were drawn up towards the abdomen, but she had no acute pain upon pressure anywhere. She never rallied from this state, but got rapidly worse, and she died at half past one o'clock A.M., on the ninth—the seventh day after delivery.

I have confined myself, in the foregoing report of cases, to a simple detail of the more prominent symptoms manifested during the progress of the disease, with an account of the final result. I have no intention of deducing any positive conclusions as to the nature and treatment of the fever which was present in these instances, from such a limited

experience (which, however, is all that I possess) as those few cases affords; and, accordingly, I shall conclude by calling attention to a few points of interest associated with the history of the patients:—

First, as to *Treatment.*—I did not adopt any one fixed rule or plan of treatment in regard to the management of these cases, but rather met the symptoms as they arose in accordance with the general principles of the science of medicine. Thus, I administered preparations of opium to allay pain and procure sleep; I gave a variety of astringents to control the diarrhea; terebinthinate fomentations and linseed meal cataplasms were applied to the abdomen, as remedies for the tympanitis and the feeling of uneasiness so constantly experienced in this region by my patients. As to stimulants—wine, brandy, and spirits were given in moderate quantities to three of the patients. The fourth, Mrs. R., did not get any vinous stimulants, but drank all through, as did the others also, good beef tea and chicken broth in liberal quantities. And she, as will be noticed, was the only case of recovery amongst the four. But, it is far from my intention to convey that the *post hoc* was *propter hoc* in this instance. The symptoms, in many important particulars, were the same in all three, viz.—the rigor about the beginning of the second day after the confinement; severe headache; great acceleration of the circulation, with a pulse starting at about 120, and soon reaching, and remaining at 140; non-secretion of the milk; suppression of the lochia; an uncontracted state of the uterus; thirst; sleeplessness; tympanitis; and diarrhea. The intellect remaining unimpaired to the close, and all evidence of acute peritonitis being absent. For I did not detect any evidence of peritoneal inflammation in any of the cases. There was, as I have detailed, great distress and uneasiness upon pressure being made over the abdomen, but no excruciating pain, such as is common in peritonitis, existed; the countenance was not such as is usually present in that affection; and the *decubitus* was easy, with the limbs extended. The one lesson which the cases seemed to me to plainly teach was, that there was a poison circulating through the blood, and that it was potent enough to destroy life.

Dr. John A. Byrne read a paper on a case of *Spina Bifida*, and exhibited a drawing by Mr. Conolly, which showed the appearances of the tumour. It occurred in a male child, the woman's first, and occupied the situation of the two lower dorsal and three upper lumbar vertebræ.

At first the tumour was very nearly oval in shape, but as the disease advanced it became more circular, and just before the death of the infant it measured twelve inches in circumference; it was very purple in colour; elastic, and presented the other characteristics of this malformation, and was very much abraded on the surface, as if the cuticular coverings had

been removed during the process of parturition; an appearance which Dr. Byrne stated he had frequently observed in these cases. The cranial bones were separated to a greater extent than natural, and this separation became more manifest as the disease advanced, until it finally presented the appearance so beautifully delineated in the drawing.

The health of the infant during the first two months was very good—the abraded surface of the tumour had become perfectly cicatrized; it enjoyed its food, slept well, presented no symptoms indicative of any nervous lesion, and was going on well until the ninth week, when it began to lose appetite, and look very delicate; it also became very peevish, and began to be attacked by slight convulsive movements; and these symptoms increased until its death, the size of the tumour increasing in proportion. The bones of the cranium also became more widely separated; and in this manner it lived on for about ten or twelve days, when it died in an attack of convulsions.

The treatment adopted in this case was pressure, but it did not prove successful, although it appeared to prolong the infant's life for some time. Out of five cases of this malformation which he, Dr. Byrne, had seen, death occurred on the second, fourth, ninth, and twelfth days respectively, and, as we see in this case, the child lived for three months; and were it not for the accompanying cerebral complication, it is probable that continued pressure would have been attended with success, as in some of the cases related. As far as Dr. Byrne's experience of this malformation went, it was most frequently accompanied by separation of the cranial bones, from effusion within the cranial cavity, as out of the five cases mentioned it occurred in four. Three of the children were males and two females.

TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.[a]

SESSION 1861-62.

FEBRUARY 12, 1862.

DR. POPHAM in the Chair.

Epilepsy, Real and Feigned. By DR. T. W. BELCHER, Physician Extraordinary to the Cork Fever Hospital; &c., &c.

While standing in a well-known music shop in Bridge-street, on Jan. 23, about 3 o'clock, P.M., I observed a man coming from St. Patrick's

[a] These Reports were supplied by the late Dr. W. P. Bernard, Secretary to the Society.

Bridge, and making laborious efforts to reach the door inside which I stood. At last he did reach the doorway, and diversified his attempts at pushing in the door by tumbling against the plate glass at both sides, and by raising his right hand as if to avert some injury, which, from his frightened aspect, he seemed to fear from above.

Thinking the man was drunk, I opened the doors to save the glass from destruction, when he fell heavily to the ground in a fit, and remained so for about 12 minutes. For a time he struggled violently, tossing about his arms and legs; his face assumed a purple colour, while the skin got at first cold, then warm, and finally he perspired; the pulse being, in the first instance, small and quick, but later, strong and full. Meanwhile he kept his eyes open; he did not foam at the mouth. So far as I could observe, he did not utter a cry or exclamation of any kind previous to or at the time of his fall. By partly raising his head and shoulders, and by loosening his neckcloth; by throwing water on his face, and into his mouth, as well as by rubbing his hands, so as to re-establish the circulation in the extremities, he soon got better; after a sigh or two he quietly settled himself as if for sleep; and finally, much against his wish, he was placed in a vehicle, and driven homewards. As the physician has not often the opportunity of witnessing the immediate antecedents of an epileptic seizure, I made some inquiries relative to the case; and on the following day called at the residence of the patient.

From his wife I learned that he was aged 43; that he had had frequent fits for 10 years past, but not one for more than a year previous to this attack; and that each had occurred after a drinking fit, as indeed it had on this occasion; that the man knew well when it was coming; he saw strange sights; and that with this knowledge, and this—as I may term it—hallucinative or illusive vision,[a] he had sought to gain the music shop to avoid being run over by horses.[b]

He is a cabman by occupation, a man of apoplectic build, and has always recovered immediately from the fit. Indeed, at the time of my visit, he was driving his cab as usual.

In connexion with this I may note a case which I met with some time ago.

In the year 1855, when the militia regiment of which I have the honour to be the senior medical officer was stationed at Ballincollig, I was aroused one night by an officer, who begged me to come forthwith to the assistance of one of his men.

While ascending the stairs I heard yells of the most extraordinary kind issuing, as it afterwards appeared, from the patient, who spat in my face

[a] "*L'hallucination*, la perception des signes sensibles de l'idee; et *l'illusion*, l'appreciation fausse des sensations réelles!"—De Boismont—Des Hallucinations, &c.

[b] See Dr. Forbes Winslow on the Premonitory Signs of Epilepsy. Obscure Diseases of the Brain and Mind, pp. 455-462. 2nd Edition.

the moment I stood by the bedside. He was in a profuse perspiration, tossed himself about in all directions, opened and shut his eyes and mouth frequently, shouted, and spat with all his might, and emitted vocal sounds which no pen could describe.

Some few of the symptoms were those of epilepsy; but the case recalled to mind the "δαιμονιξομενοι" of Holy Writ more than any disease to which mortal men in our day are subject. A very little reflection sufficed to convince me that here was a clever individual, who hoped, by simulating disease, to obtain his discharge from the restraint of plenty of work, supervision, and cleanliness.

He was treated on the spot, before a large number of his fellow soldiers. First, I had him half drowned with cold water—it was a frosty night; next, I had water poured on his face from a height of two or three feet. At last his fortitude gave way, and away went the pretended fit also.

The next part of his treatment consisted in mixing 25 grains of ipecacuanha, and one grain of tartar emetic in a soda-water bottle full of tepid water, and forcing him to drink the mixture after the manner of drenching horses. Lastly, I had his hair cut off, and an ample blister substituted for it; he was taken to hospital, and put on spoon diet. It is unnecessary to add, that not only did his fits never recur, but that no one else got any; and for more than a year after, while I had my eye on him, he entertained a most wholesome horror of feigned diseases, and of the terrible powers of the materia medica.

There is, perhaps, no disease more classical than epilepsy. The Greeks called it ἐπιληψια from the abrupt suddenness of the attack; and the ancients generally ascribed its origin to supernatural causes.[a] Among the Romans it was termed "morbus comitialis," because when a case happened in the Forum the meeting was forthwith dissolved. Those present used to spit on the patient, or into their own bosoms—hence another name given to it, "morbus qui sputatur." Cullen's definition of it is, "musculorum convulsio cum sopore." And if we refer to one of the ancient physicians—than whom none were better observers of nature, and of the symptoms of disease—we find it thus concisely described by Celsus:—"Homo subito concidit: ex ore spumæ moventur; deinde interposito tempore ad se redit et per se ipse consurgit;" and he immediately adds, "Id genus sæpius viros quam fœminas occupat."[b] Foville thinks it is more common in females than in males; while Drs. Elliottson, Watson, and many others, coincide in the opinion of Celsus just referred to.

Of making books on this subject there seems to be no end; for in Mr.

[a] Sanctorellus, a physician of the sixteenth century, says this notion was general even in his time. The persons affected were presumed to be under the influence of evil spirits, and hence many simulated the disease to excite sympathy. He relates a case in point.

[b] De Medicinâ, Lib. iii., Cap. 23.

Churchill's last catalogue the names of Drs. Reynolds, Sieveking, and Radcliffe are presented to the profession as authors of monographs on epilepsy; and we may add another work published by the New Sydenham Society, *On the Minute Structure and Functions of the Spinal Cord and Medulla Oblongata, and on the Proximate Cause and Rational Treatment of Epilepsy*, by Professor Schrœder Van Der Kolk (Translated by W. D. Moore, A.B., M.B.), 1859.

Without entering into any tedious array of the various kinds and degrees of epileptic seizures, the various predisposing causes, and the commonly received modes of treatment, it may be well to notice a few points in the first case detailed in this paper.

The total absence of the cry peculiar to these seizures may be noted; and the absence of convulsive closure of the teeth is also worthy of remark. To these add freedom from foaming at the mouth, and we have a case of epilepsy, minus three of its commonest symptoms. Among feigned diseases, attempts at simulating epilepsy occur, perhaps, more frequently than any other, inasmuch as the occurrence of a fit is perfectly consistent with intervals of health; and these intervals may be long or short, just as the impostor pleases.

It has also been observed that no disease has been more frequently simulated with success.[a]

In the case detailed in this paper the man made but a poor attempt. His jabbering or shouting like an ape—or, as we should now say, a gorilla—was not an epileptic symptom. He did not complain of any premonitory symptoms; he opened and closed his eyes frequently, had no soap suds in his mouth, or swallowed blood ejected from his stomach; his skin was hot, and he selected the most harmless place for his exhibition; he had not the peculiar physiognomy of the epileptic; nor were his daily habits of that retiring kind so commonly met with in a genuine case.

With the cabman, the predisposing cause was plainly drunkenness—a cause which, according to Dr. Carpenter,[b] predisposes to more diseases than any other we know of. Dr. Todd gives several interesting cases of what may be termed "eccentric" epileptic seizures, depending on syphilis, gouty kidney, a blow on the head,[c] and soforth, and he rejects the idea that congestion has anything to do with that state of the nervous system which produces epilepsy. His theory is, that "the phenomena of the epileptic fit depend upon a disturbed state of the nervous force in certain parts of the brain—a morbidly disturbed polarity. This may take place under the influence of some poison which may have an affinity for those parts, such as prussic acid—in the same way as strychnine induces an ex-

[a] See Gavin on Feigned Diseases, p. 179.

[b] Physiology of Temperance and Total Abstinence.

[c] *A blow on the head.* See also Dr. Winslow, op. cit., 2nd Edition, p. 664, and a case by Dr. Russell, in the Medical Times for Feb. 22, 1862.

alted polar state of the spinal cord, or from some disturbance of nutrition which may be strictly local or sympathetic. This undue exaltation of the polar force induces, subsequently, a state of depression or exhaustion, not only in the parts primarily affected, but in some parts of the brain connected with them, according to the degree of the primitive disturbance; just as undue muscular action exhausts the muscular force. The disturbing cause may operate primarily upon parts of the brain more directly concerned with the phenomena of consciousness, as the hemispheres; or upon parts which, when excited, may cause convulsions—as the mesocephale, the region of the tubercula quadrigemina. If the former be chiefly affected, and the latter slightly, or not at all, convulsions are either slight or do not constitute a part of the epileptic fit. If, on the other hand, the latter are chiefly and primarily disturbed, convulsions form the prominent part of the fit. Now the exciting cause of all this disturbance generally operates equally on both sides of the brain. But it may operate more on one side than the other. It leaves behind it a more or less exhausted state of the brain; which again will be most upon that side upon which there has been the greatest previous excitement. This state of exhaustion is very apt to continue as one of weakened nutrition, in which brain tissue is more or less in the condition of a white softening. If the parts in this be the convolutions, mental power, memory, perception suffer; if the deeper parts, as the deeper parts of the white matter of the hemisphere, and the corpora striata, and optic thalami, then we have hemiplegic paralysis."[a]

In the case related by Dr. Todd,[b] of an officer who got a blow on the head, and some weeks afterwards had an epileptic fit, the iodide of potassium was used with success after many other remedies had failed. He advocates a similar mode with cases depending on syphilis; in the latter, however, he has also used mercury with advantage.

Professor M'Dowell, in a paper in the *Dublin Hospital Gazette* for 1854, details a case of what he terms "Syphilitic Meningitis," in which the plan advocated by Dr. Todd was singularly successful; and in a recent number of the *Medical Times*,[c] Dr. Russell, of Birmingham, publishes a case of "Epilepsy in Constitutional Syphilis," which was successfully treated much in the same fashion.

In the epileptiform affections of infancy, M. Blache, of the Enfans Malades, Paris, recommends the following preparation:—Oxide of zinc, two drachms; calomel, one drachm; powder of valerian, one drachm; mix, and divide into 70 parts, one to be taken night and morning. A

[a] Clinical Lectures (1861), p. 790. Compare with the above that part of Watson's Lectures (pp. 643, &c., Vol. i., 4th Edition), in which the anti-congestion view is given; also, Van Der Kolk's ingenious theory (op. cit.).

[b] Op. cit., p. 855.

[c] Feb. 8, 1862.

foreign journal[a] informs us that Dr. Lange, of Königsberg, tried atropin in nine cases of epilepsy, three of which were males and six females. The three males, who had been epileptic for years, were cured after its employment for periods varying from three to six weeks. Among the females two cases remained uncured, one died, and three seemed cured, as they had been free from attacks from five to eleven months; the dose was scarcely one-tenth of a grain.

The *Medical Times* for 1858 says:—"In the case of a young man, who had suffered from more than 500 epileptic attacks within the space of eight years, Dr. Reiner tried the effect of compressing both carotids until the complete cessation of the pulsations. This procedure, practised 22 times, on the first appearance of precursory symptoms, always had the effect of reducing the paroxysms to a few almost insignificant convulsive movements; meanwhile, the patient's general condition, both bodily and mental, has greatly improved."

In an American journal for 1861[b] a curious case is recorded apparently resulting from the insertion of a set of artificial teeth. The patient had suffered from carious teeth; and, on the substitution of the artificial set, paralysis of the face and tongue resulted. There was a peculiar drawing of the mouth, from which the aura epileptica came, just preceding the convulsions. The tongue was inclined to fall back within the mouth; the patient was fearful of swallowing it. The false teeth were removed, and the soldering was found discoloured. Another plate (of India rubber) was made, when the epilepsy ceased, and the paralysis gradually subsided.

In the *Medical Times* for February 1, 1862, a case is recorded as having been treated in St. Thomas's Hospital, by Dr. Peacock. The details show it to have been a very bad form of the disease, in which the intellectual powers were much impaired. With this patient—a female, aged 11—"the treatment was commenced by giving her a calomel and scammony powder; and this was directed to be repeated at intervals, as needed. She was ordered two grains of sulphate of zinc in infusion of valerian, three times daily. The dose of the sulphate of zinc was increased by two grains on each day of visit, or twice during each week, till, at the beginning of November, or in about a period of 10 weeks, she took 42 grains, three times daily; and this dose she continued for four days, when she became slightly sick, and it was suspended in consequence. During the whole of this time she never had any nausea, or sickness, or other symptoms indicating that the remedy gave rise to any irritation of the stomach or bowels. The urine was several times analyzed by Dr. Bernays, but only a trace of sulphate of zinc was ever detected, and it was therefore supposed by that gentleman that the zinc entered into combination

[a] Deutsche Klinik, 10, 1854.

[b] The Boston Medical and Surgical Journal.

with the albuminous matters in the alimentary canal, and so passed out of the system."

No other cases were given in which sulphate of zinc was administered in the same fashion, for the detail concludes in these straightforward words:—"The effect of the treatment was not satisfactory; the fits became rather less frequent, but more severe, being more frequently attended by convulsions, and followed by more decided and prolonged coma."

Other preparations of zinc have been used in this disease. Dr. Marcet, assistant physician to the Westminster Hospital, formerly considered the *oxide* a specific in cases of epilepsy;[a] but in his recent work *On Chronic Alcoholic Intoxication*, he says:[b]—"Since that time (1855), however, having continued to prescribe the remedy for the treatment of this disorder, I am now obliged to admit that it seldom, if ever, cures the disease, although it is certainly often attended with beneficial effects." In his late work, to which I have referred, he gives two cases in which large doses were given; in the first commencing with six grains, in the second with one grain, and in each case extending to 35 grains twice daily.

The *phosphate* of zinc has been administered in epilepsy with success, by Dr. Barnes, and the lactate by Dr. Herpin, of Geneva.

Dr. Jackson, of the Metropolitan Free Hospital, has lately published 13 cases, in 12 of which he used the bromide of potassium. A considerable degree of success seems to have attended this mode of treatment, even in those cases which he designates "unsatisfactory," in the result. The dose varied from three to five grains given thrice daily.[c]

Dr. Bristowe, of St. Thomas's Hospital, gives the case of an epileptic lad, aged 14, in which the lower extremities, while in the recumbent position, resembled those of a paraplegic patient, but yet without anesthesia. Whereas, when he attempted to turn or get out of bed a sensation "of pins and needles" crept from the toes upwards, and was almost immediately followed by a fit. He got five drops of liquor arsenicalis in infusion of gentian, thrice daily, with the best results; and although the fits ceased at once, yet the aura remained for a time, and the liability to have fits from any excitement continued—"both of which points," the writer adds, "are quite compatible with the view that the amendment in this case was due to the use of arsenic, and indeed favour it."[d]

Dr. Bennett, of the same hospital, lately had a case of epilepsy which terminated fatally; and, on *post mortem* examination, "the middle and lower lobes of the right cerebral hemisphere were found to be occupied by two cysts, of which the posterior was the larger, and contained about

[a] See his report on its use in the British Medical Journal for 23rd November, 1855.
[b] P. 95. London, 1860.
[c] See Medical Times for Dec. 21, 1861.
[d] See Medical Times for Jan. 11, 1862.

eight ounces of clear fluid."[a] These cysts he looks on as parasites, probably entozoa, as the case is headed "Ecchino-coccus in the Brain;" and as no other morbid appearances were found in the body, he reasonably concludes they caused the epilepsy to which the patient succumbed.

It is a striking proof of the littleness of our knowledge of some of the most fearful changes the human frame is called on to undergo, that in many cases of epilepsy no morbid appearance can be found on which even the most fanciful conjecture may be hazarded as to the cause of the disease.[b]

February 26, 1862.

Delirium Tremens.—Dr. Cummings read the following case:—

Mr. ——, aged 25, inherits an hereditary predisposition to dypsomania, as his father died of delirium tremens at the age of 25. Has been for some years addicted to dissipation and intemperance; but, as far as I can learn, does not steadily indulge in alcohol, the turn of his vice being rather to enjoy what young men call "a spree" for some weeks, returning after each to comparatively steady habits. Of late, however, the lucid intervals have become less and less frequent; and some time since there were one or two threatenings of delirium tremens.

A few months ago he had venereal, which was treated with mercury. On the 24th of January, 1861, he called on me, and informed me that, six weeks before, he had contracted gonorrhea and superficial ulcers on prepuce and glans, for which he used no medical treatment. The latter still continued, and were now accompanied by a suppurating bubo in each groin. These I opened, and touched the ulcers with caustic, &c., &c.

After a day or two he called again, when I found him much improved, and, besides the usual remedies, ordered him to take the Turkish bath. He left Cork almost immediately after this, and went to a provincial town, where he not only completely neglected his health, but ran a most fearful career of drink and dissipation. He did not return to Cork until the end of March, and was not found by his friends until the 23rd, when I was immediately called to see him, and found him in the following condition:—Ulcers on penis still open; buboes healed; rupial crusts on ala of nose, cheek, neck, thighs, and body; alcoholic breath; ferrety eyes; constant tremors; vomiting; tongue furred, moist, and tremulous; excessive thirst; epigastric tenderness; pulse 100, feeble; skin clammy

[a] Medical Times, Jan. 25, 1862.

[b] That very common coincidences may sometimes have no connexion with this disease, is evident from a curious case given by Dr. Winslow (op. cit., p. 697), where, from the discharge of a tapeworm, it was reasonably concluded that the cause of the disease has been discovered, and an immediate cure was confidently expected. Yet the fits continued; and a *post mortem* examination did not reveal any apparent cause for the severity and long duration of the cerebral disorder.

and perspiring. Has been constantly drinking, and has eaten nothing for several days; says he has slept well, but it is not easy to depend on his statements, as he is evidently not quite rational; bowels confined. I ordered him beef tea, a warm bath, a small quantity of wine, a purgative draught, and a grain of opium every third hour.

24th.—Has taken the pills regularly, but has slept none; tremors continue; some delirium; memory of last few days gone; stomach has not been sick since the draught operated; urine scanty and high coloured; pulse 90. Ordered to repeat the warm bath and purgative draught, to continue the pills, and to take a diuretic mixture.

25th. Has slept a little; is less fanciful, and more rational; appears much prostrated; pupils contracted. Omit pill; repeat purgative draught and diuretics; 40 minims of laudanum, with Hoffman's ether, to be taken at bed time, and repeated every three hours till sleep; half an ounce of brandy every three hours; beef tea, &c.

26th.—Spent yesterday well; free from vomiting and excessive thirst; took the laudanum at 11 P.M., and again at 2, as he had no sleep, and was very restless and excited; about 4 P.M. he jumped out of bed, and ran down stairs. He is greatly disturbed by visions and fancies—one of the latter being of a rather novel kind, that an electric battery is in his head. It is amusing, and at the same time melancholy, to witness the contortions of his countenance and entire frame when he fancies the electric circle is complete. I gave him immediately a double dose of the mixture, with an ounce of brandy, and directed a single dose to be given an hour after, if not composed. I also applied a cold water stupe to epigastrium, which tranquilized him much for a time. At half-past nine, as the symptoms continued, I gave him half a drachm of laudanum; and between that hour and nine gave him two doses more, with ammonia and brandy. He then dozed a little; but awoke, in a few moments, very much excited, and perfectly uncontrollable; he was then given another 40 minims of laudanum; so that in all, from 11 P.M. to the following 2 P.M., a period of 15 hours, he had taken nearly four drachms of laudanum without sleep. The symptoms seemed to have warranted this free exhibition of opium, as he was in so fearfully excited a state almost the entire time that he exhausted himself and the attendants who were trying to hold him. About half-past two he dozed; and shortly after was found by his attendants with his face and lips livid, bathed in cold perspiration; respiration deep and slow, only two or three in a minute. I happened, most fortunately, to arrive just at the moment, and found him with the cold sweat and pallor of death on his countenance, respirations deep and suspirious, only two or three in a minute; pulse exceedingly rapid, and almost imperceptible; pupils contracted to a pin's point. I had him at once raised up, well shaken, and slapped violently over the face and chest; sinapisms were applied to epigastrium and legs, and every other

means that could arouse him were adopted. After a short time he not only rallied, but became as wild and excited as before, requiring four men to hold him in bed. I administered stimulants freely, but would not allow him to lie down; and even when sitting erect, if left to himself for a few moments, from the wildest state of excitement he would suddenly become quiet, begin to nod, and doze off as he was. I allowed him to enjoy those snatches of sleep in the sitting posture, for some time; and at last permitted him to lie down, when I found, that if allowed to sleep for more than a few minutes, the respiration became less and less frequent, and the face more and more livid, until the frightful train of symptoms before enumerated was reproduced. From this state he could be aroused by the same means as before; but he relapsed again and again, alternating each with a wild fit of furious excitement, during which his muscular power was extraordinary.

I sat by his bed side for hours, permitting him to sleep as long as I thought he could do so safely, and then rousing him. Gradually each time the stupor became less and less deep, and the excitement less frantic; so that after an hour or so had elapsed I could let him sleep as long as half an hour at a stretch. In the evening Dr. W. Townsend saw him with me, approved of the way I was managing him, and added to the treatment a mixture of camphor and ammonia. Late in the evening I was able to leave him, when he slept seven hours continuously, and awoke perfectly rational and composed.

28th.—Slept much during the day, although the cutaneous irritation from the morphia, which has caused a rash like urticaria, annoys him much.

29th.—Was excited, and trembling again last night; but slept after taking half a drachm of laudanum.

After this the symptoms of delirium tremens did not return, but the primary and secondary venereal disease required careful and anxious treatment for some time. He ultimately recovered perfectly; the cure being much promoted by the Turkish Bath, which, in such cases, is an invaluable aid to medical treatment.

The symptoms of delirious excitement were greater in this case than in any other I have seen recover; and I have little doubt, that unless sleep had been procured, the system must soon have sunk exhausted—at the same time, we must admit, that the treatment had much to do with, indeed was the sole cause of the train of symptoms which were about to terminate life by apnea, when I opportunely arrived.

I find notes of a somewhat similar case in a valuable paper on Delirium Tremens, by Dr. Marston, republished in the last July Number of *Braithwaite's Journal*. A patient at 39, took at noon a drachm of laudanum, and as he vomited soon after, was given another half drachm at two. At three he said he thought he would sleep, and lay down. The

face became livid and the breathing heavy; in about a quarter of an hour he had an epileptiform convulsion, two or three followed, and in about three quarters of an hour, he died with symptoms of apnea. At the *post mortem* D. M. could detect no organic disease to account for death; the left ventricle of the heart, however, was in an advanced degree of fatty degeneration, and, *besides some venous congestion of the membranes of the brain, there were a few drachms of fluid in the cerebral ventricles.*

In considering the treatment of delirium tremens, it is necessary to remember that there are two forms of the disease, one occurring in the inveterate dypsomaniac, and attributed to withdrawal of the accustomed stimulus; and the other in the occasional debauchee, what is called acute alcoholism. My patient exhibited a mixture of both; for, while for months he had been almost constantly intoxicated, he had continued to take the stimulus almost up to the moment of being attacked by the disease.

In a simple case of acute alcoholism, where all admit that the poison is circulating in the blood, the most rational treatment would seem to be to act freely on the excretory organs, especially the skin, which nature so manifestly points to, and thus endeavour to eliminate the poison, after which, if sleep did not return naturally, there could be no objection to an opiate. The treatment of the other form seems equally simple, if it is admitted that withdrawal of the accustomed stimulus has produced a condition of nervous irritability and exhaustion, viz., to restore the stimulus and tranquilize the irritable nervous system by opium. These are the plans which are generally adopted, and under such treatment a large proportion of both classes of the disease recover; but I think every one who has seen and read the history of fatal cases of delirium tremens, can hardly fail to believe that opium has assisted many of them to the other world, and that the contracted pupil which precedes death is rather a symptom of the medicine than of the disease.

Now, the case I have recited made me think very seriously whether opium is so very necessary in delirium tremens, as we generally suppose; whether, in fact, the patients who recover, would not recover without the opium, and whether those who die might not have been saved if no opium had been given. In cases of acute alcoholism, I have no doubt that opium is at least unnecessary; that the simple removal of the poison would restore the balance of the nervous system, and that sleep would necessarily follow of its own accord; and I think it is a question fairly open to discussion, whether in the latter class the symptoms are due to withdrawal of the stimulus; whether, in fact, they also are caused by circulation of the poison through the nervous system, rather than to exhaustion and irritation of that part. Now, on looking over a few authorities on this subject, I find that there is a difference of opinion regarding it among competent judges; not a few holding that in no case is delirium tremens caused by withdrawal of the stimulus.

Dr. Marston's very able paper, illustrated by carefully registered cases, seems, at first sight, convincing as to the contrary, as he brings forward many instances of soldiers, supposed to be temperate, but discovered afterwards to be habitual soakers, being attacked by the disease a few days after admission into the hospital for trivial injuries, or confined in cells for punishment. But is there no other cause for the attack in such cases? I think there is; an active soldier drinks for years without ever making himself actually drunk (such is the history of these cases), until confined to bed or to a cell, when delirium tremens occurs; in fact, while going about exercising actively, the hydrocarbon is as gradually thrown off by respiration, evacuation, &c., as it is gradually imbibed; it is oxidized and eliminated by degrees, so that it scarcely exists in the blood at all as a poison, and does not affect the nervous system. But the habits suddenly change; no exercise is taken, oxidation and excretion are reduced to a low point, and the poison accumulates in its most dangerous form. It has been observed that the habitual drunkard does not get delirium tremens in prison, although there too "his grog is stopped." What is the cause of this exemption? Is it not probable that the exertion which is part of prison discipline, maintains the vigour of respiration, and general excretion intact?

We all know that the most fatal cases of delirium tremens are those which are complicated with disease of the lungs, liver, kidneys, or some other organ. Is this because the nervous system is in such cases more excitable? or is it because the natural vents for the poison are closed? we can scarcely doubt the latter. Now, if it is established that in all cases of delirium tremens the symptoms are due to alcoholic poisoning, can we with impunity give large doses of a medicine which undoubtedly reduces the frequency of respiration, and checks the function of all the excreting organs?

Dr. Thomas Laycock, in a paper published in the *Edinburgh Journal*, October, 1858, states that Dr. Ware of Boston, watched and described the disease as it ran its natural course, uninfluenced by remedies, and found "that it was a self-limited affection; dating from the time, when the state of entire watchfulness and delirium commences, he found that it terminated by natural sleep, in not less than 60 or more than 72 hours; the only cases in which death took place after sleep came on were those which had been treated by large doses of opium. He treated 29 cases on the expectant method, 1 died; 12 by emetics, 1 died; 8 with opium, 4 died." "Esquirol and Calmeil treated their cases by the expectant method, using no narcotics, only diluents and warm baths, with repose; in the large majority of cases recovery took place in four or five days." Dr. Laycock also mentions 28 cases treated by him (with one exception), without opium or stimulants, all of which recovered rapidly.

There are, of course, many points to be attended to in the treatment of delirium tremens, and the individual peculiarities of each case must guide us in it, as in the treatment of other diseases. I am far from being an advocate of leaving any case to nature, although I appreciate the value of being aware that this disease, as well as others, tends towards a natural cure. But the grand indication of treatment ought, I think, to be, to get rid of the poison, rather than to trust principally to a medicine which, by retarding excretion, counteracts the natural tendency towards cure. If sleep is in the early stages absolutely necessary, by reason of great excitement, then it seems to me that it can be more safely as well as promptly induced by the inhalation of chloroform than by opium; but if in the latter stages, after elimination has been freely promoted, sleep is not restored, moderate doses of opium can hardly be attended by danger.

There is a class of cases too, where patients, in good health otherwise, seem to be on the verge of delirium tremens, without actually suffering from the disease, where the natural revolution of the economy, which tends towards sleep at certain hours, has been broken, as it often is in analogous cases, by anxiety, prolonged study, or mental emotion; and in such cases after a warm bath and free purgation, a full dose of opium at bed time, acts like magic in restoring the diurnal revolution of the system. Such cases should not be confounded with true alcoholic poisoning; and it is very doubtful whether, even if left alone, they would run into delirium tremens. Such cases are exceedingly common, and probably have been one means of leading us to repose such confidence in opium as we have been in the habit of doing.

I have prolonged my remarks on this case further than I intended, although far less than the importance of the subject demands. I have said little of the use of stimulants. I believe they are often carried too far; and if it be true that delirium tremens really, in all cases, depends upon alcoholic poisoning, we are unquestionably adding fuel to the fire by administering alcohol in any form while the poison is still present in the system. It must not be forgotten, however, that want of sleep in itself tends to exhaust the nervous system, and that as the effect often outlives its cause, moderate stimulation may become necessary in the latter stages. It would be very desirable to put these views regarding the treatment of delirium tremens, to the test in one of our large hospitals, in the same way that Dr. Laycock has already done in the Royal Infirmary of Edinburgh. Prejudice is strong with us all in favour of treating delirium tremens with opium and stimulants, but, *if at the bed side* we find, as Dr. Laycock and others have done, that simple treatment is more efficacious and less dangerous than that we have been accustomed to, we ought to lay aside all our preconceived ideas, and adopt that which is proved most useful.

A Remarkable Case of Gun-shot Wound. By Dr. Belcher.—The following case was brought under my notice by Mr. Joseph O'Kelly, one of our most intelligent medical students; and, I have much pleasure in announcing, that I have induced the subject of my remarks to present himself to you for examination this evening.

Jeremiah Murphy, aged 27, a soldier invalided from the 40th regiment, was 14 days ill, previous to admission to the Fever Hospital, on the 10th February, 1862, when he presented the following symptoms:—Hemoptöe, pain under the left mamma, dyspnea, diarrhea, want of sleep, and great debility. The pulse was exceedingly feeble, never exceeding 72, and came down so low as 54.

After he had continued under the care of Dr. M'Evers for some time, he recovered from these symptoms, and is now apparently well.

In the course of his illness, the patient stated that he had suffered much inconvenience from the effects of a gun-shot wound which he received during an action with the natives in New Zealand, on the 27th June, 1860. While in the act of firing, he was struck by a bullet in the left shoulder; the ball penetrated and has not since been extricated. Previous to his being invalided, he was brought before a Medical Board at Fort Pitt, when, according to the patient's statements, the general opinion was, that the ball passed under and round the bone, wounded the left lung, and lodged in some unknown spot in the side.

The reasons which probably influenced this opinion were:—1. The exostosis or splintered state of the upper part of the humerus. 2. The spitting of blood and pain in the left chest at and for some time after the injury. 3. Emphysema of the same lung; and 4. Pain about the intercostal spaces at the left side, where they presumed the ball had lodged.

Others were of opinion that the ball remained in the neighbourhood of the shoulder joint.

Poisoning by Aconite applied externally. By Dr. Belcher.

I beg to recall to your recollection a very interesting paper "On Poisoning by Aconite," which Dr. Atthill contributed to the 63rd number of the *Dublin Quarterly Journal of Medical Science* (Aug., 1861). In that contribution we are informed that the patient inadvertently swallowed part of a liniment containing the tincture of the root; and, after a hard struggle with the effects of the poison, emerged once more into this upper world a sound man.

In connexion with this I beg to relate a case in which the *external* use of the same preparation produced the undoubted symptoms of poisoning.

A short time since a young lady was tormented with facial neuralgia. Having tried various anodynes without any good result, I got some of the tincture already referred to, and carefully applied it to the face with a

feather. This was done only too effectually; for, before I was aware of it, the bottle, which contained half an ounce, and which was so covered by the label that the exact amount of its contents could not be clearly seen, was half emptied; and very soon the lady complained of numbness and tingling, commencing at the toes; this feeling increased, and crept gradually upwards, until the whole body was affected by it; she also felt slight muscular twitchings and nausea; and these were not diminished by the fear and anxiety with which her strange condition served to inspire her. The body became cold; and, as this increased, she was put to bed, and given wine, punch, strong tea and coffee, with the application of a hot water jar to the feet. The symptoms continued, until I had her put in a warm bath, and the whole surface of the body well sponged with water as hot as she could bear it. After the bath the symptoms gradually subsided; but she did not fully recover from the effects of the poison until the following morning.

My object in detailing this case is to bring under your notice the fact that the external application of the tincture of aconite may be so pushed to excess that very bad results—possibly death—might occur, and that therefore a limit should be put to its use. Neither by Taylor, in his *Medical Jurisprudence*, nor by Royle, in his standard work on Materia Medica, do I find any notice of the poisonous properties of this preparation as an external agent.

March 12, 1862.

Dr. Popham, President, in the Chair.

Abscess on the Convex Surface of the Right Lobe of the Liver.—Dr. Popham exhibited the recent parts in the following case:

William Gall, aged 27, a sailor, was admitted under his care into the North Infirmary, December 31, 1861, with an enlargement of the right lateral and hypochondriac regions. He stated that he had been healthy up to six weeks before admission. His illness began with "a stitch" in the side, while he was aboard ship, rigors followed, and continued more or less since. As the fulness occupied the neutral ground between the liver and the right lung, a careful examination of his chest was made. Considerable dulness was found extending above the normal limits of the lung, and the lower intercostal spaces were protruded. The respiratory murmur, however, was distinct, both anteriorly and posteriorly. There was no expectoration, and but little dyspnea or cough; no sound of fluctuation was elicited upon succussion. The integuments over the tumour were intensely painful. The principal symptoms were, intermittent diarrhea; rigors, alternating with sweats; total loss of appetite, and thirst. His pulse was 104 per minute, but afterwards rose to 120. There was no jaundice, but a sallow tinge of the skin. His urine was

loaded with bile. He made some complaint of pain in the right shoulder, but it was not severe.

Upon a casual observation of the swelling, it presented the appearance of circumscribed abscess of the pleura; but a careful examination excluded such a supposition. A doubt, however, arose, whether the abscess was to be regarded as commencing in the liver and making way outwardly, or originating in the thoracic integuments, and either wholly confined to them, or else *secondarily* involving the structure of the liver. The tumour was successively treated by leeching and blistering, and other means, in the hope of putting it back, and with apparent present relief but no subsequent good effect. On the tenth day from admission the swelling pointed and was opened by Dr. Hobart, senior, with a trocar, and vent was afforded to a large quantity of a sero-purulent fluid. Upon exploring the cavity of the abscess with a probe, it was found to be very deep and extensive, and the ribs carious. From that period until his death, on February 24th, all except palliative treatment was ineffectual. The contents of the abscess became foul and putrid, and upon coughing used to pump out in large quantities. Hectic fever and vomiting, with colliquative diarrhea closed the scene.

The *post mortem* examination was made by Mr. F. A. Purcell, one of the most attentive and intelligent students of the hospital.

The convex surface of the right lobe of the liver was found closely adherent to the lower ribs, so as to form a circle of about four to five inches diameter. On breaking the dense adhesions which circumscribed the abscess, and with which the external opening communicated, an exit was given to about a pint of *white* fetid pus. The portions of the ribs connected with the abscess were so carious as to crumble in pieces, the periosteum being totally denuded over their surface. No communication existed with the pleura, neither was the diaphragm involved; the right lung was sound.

The convex surface of the liver which formed the inner wall of the abscess was hollowed out like a saucer, the surface being of a mottled bluish colour, more like the texture of lung than liver, and resembling the slate-colour tinge of some species of granite. A greyish thin superficial layer, which was apparently false membrane, covered the granitic-looking structure just described, and was capable of being dissected off. There was decidedly a loss of substance of the liver. Immediately beneath the bluish structure described, its texture became condensed to almost a cartilaginous hardness. The rest of the organ was not much altered or increased in bulk, but an abscess, about the size of a walnut, was found in the under surface of the left lobe. The gall bladder was full of thick orange-coloured bile. The intestines were not examined.

Dr. Popham remarked that, in weighing the probabilities as to whether the *point de depart* of the abscess was in the liver or the walls of the

thorax, he at first inclined to the latter opinion; but, upon a close examination of the *post mortem* appearances, he changed his views. The loss of substance of the liver, and the hard gristly substratum which formed the floor of the abscess, and consisted of condensed hepatic tissue, were quite characteristic of original suppuration of that organ. The large amount of pus discharged daily, was fully explained by the want of contraction in the condensed tissue above-mentioned, which prevented the closure of the abscess. The situation in which the tumour presented was unusual, the tendency of hepatic abscesses being to burst inwardly rather than by the intervention of thoracic adhesions. The absence of jaundice, as a symptom, was accounted for by the small and superficial portion of the liver which was engaged. The same circumstance explained the *white* colour of the pus, many writers considering the contents of deep-seated abscesses of the liver to have a tinge of brickdust colour.

Dr. W. C. Townsend exhibited an enlarged heart:—

Pat Cowhig, aged about 30 years, over six feet in height, and proportionately stout, was admitted to the Workhouse Hospital in the middle of December. He had been for some time in the Workhouse previous to his seeking admission to hospital, and did not complain of illness. It was difficult, if not impossible, to obtain any accurate account of his previous history, except that he was a labourer, had served in the army for a short time, and was discharged with a temporary pension, which was now some time discontinued. States that he suffered from cough and difficult breathing for a long time, but still worked on. His appetite is good, and he has no idea of his dangerous state.

On admission he suffered from general anasarca; his breathing was hurried; the jugulars distended; surface of body cold; pulse, feeble; intense and extended dulness over cardiac region; crepitant râles over both lungs, anteriorly and posteriorly; impulse of heart strong, and a well marked murmur over the apex with the first sound which was quite inaudible in the neighbourhood of the sternum or aortic valves. This man remained in hospital, the dropsical symptoms gradually increasing. He died on the 6th of March. It was remarkable how little he complained, although he suffered very much, until a few days before his death, when he became quite delirious; threatening to destroy himself if not relieved.

Post Mortem.—The body extensively tumid, so as to require a shell of excessive dimensions to enclose it. On opening it I found it contained about nine gallons of serous effusion; the entire peritoneum of a whitish and sodden look from its being saturated in the same fluid, and showing slight traces of inflammation on the whole of its walls. The liver of large size, though otherwise normal, as were all the viscera, with the exception of the heart, which was immensely increased in size, though

its muscular substance, especially on the right side, was very flaccid. On opening it both auricles appeared very large, though the musculi pectinati were nearly lost; the left ventricle was so much hypertrophied, at the expense of the right bulging into it, as almost to make it difficult to trace the right auricle from the ventricle; the valves, normal, with the exception of the mitral, which was extensively ossified; the semilunar valves normal, although the mouth of the aorta was very large and patulous, on which cause I think the excessive size and amount of effusion depended.

March 26.

Dr. Popham, President, in the Chair.

Dr. Sandham exhibited a very interesting dead specimen of the chick of a pea fowl, and said, "Whether the little specimen be that of a peahen or peacock I cannot now decide; but if the latter, had it grown to mature age, it would have had many reasons for being prouder than a peacock. I received the specimen from my brother; it was hatched at Sanders' Park, Charleville, the residence of the late Colonel Sanders, and was seen to move about by many. It has four wings and four legs; two of those wings and two legs occupy the usual position. The two supernumerary wings articulate with the clavicular extremity of the sternum, or, at least, near the sternal end of clavicle. The shoulders of these wings look towards the throat of the bird, while the loose feathery portion passes down over the breast, where they lie when in a state of repose; and if flapped or used would rather tend to assist the natural wings—but in a very awkward way. The two additional legs articulate at a point anterior, but very adjacent to the spot where the natural legs join the body; their position is reversed, that is, the bend or angle looks backward, while the angle of the proper legs looks forward. The supernumerary alæ and legs are perfect in every particular. Had the creature lived, you would conclude from looking at the specimen, that any movements effected by the superadded wings and legs should be in direct opposition to the natural limbs; and you would be led to conclude, that if the creature wished to move forward it would use the natural wings and legs; whereas, if it desired to run backward, it would use the supernumerary locomotives. A party who saw it run, assured me that it moved the four legs something like the style of a quadruped; for the accuracy of this statement I cannot answer; but I would decide against the possibility of such movements, from the formation of the specimen.

It was, I am informed, killed by being constantly forced to move about for the satisfaction of bystanders. I fixed it on wires as you now see it, the better to exhibit its supernumerary limbs. It has rather a strange and awkward appearance, and is a singular freak of nature."

April 9, 1862.

Dr. Popham, President, in the Chair.

Dr. W. C. Townsend read the particulars of a case of Tetanus, admitted into South Infirmary, under his care. The notes of the case were taken by Mr. M'Dermott, Resident Pupil.

History of the case.—Early in the preceding week, he received a slight scratch on the back of the right hand, caused by a party, whilst at play, introducing his nail beneath the cuticle; it had not yet perfectly healed, but showed no signs of irritation. He had been in perfect health up to the afternoon of Monday, 24th, when, on returning home to supper, he complained of a stiffness of the jaws, which partially prevented his eating; he thought little of it, however, and went to bed; he could not sleep, and (in his own words), felt all the muscles of his body and limbs becoming stiff. This prevailed to such an extent in the morning, that a medical man was called in, who administered him some aperient medicines, yet, as he continued to get worse, he was brought to Hospital at 10 o'clock A.M. on Wednesday. By his friends he is reported to have been of nervous temperament, yet always enjoyed good health.

Symptoms on admission.—He presents all the appearance of one labouring under a severe attack of *opisthotonos*. The muscles of the back and lower extremities are highly contracted, as also those of the neck and abdomen—those of the latter as hard as a board. He complains of a severe pain along the region of the spine; the muscular spasms are violent and frequent, he can with difficulty put out the tip of the tongue, and swallows with much effort. The face, pale and anxious, together with the entire body, is bathed in a profuse acid perspiration; pupils are dilated and acting. Pulse rapid, about 120; respirations rather prolonged; asks continually for drinks, bowels not moved for the last two days Ordered a turpentine enema immediately, five grains of calomel.

2 o'clock, P.M.—Was very restless since last report, and drank large quantities of whey and tea. Bowels slightly moved. Calomel repeated.

6 o'clock, P.M.—The entire day he has been quite conscious, and exquisitively sensitive to external impressions. The spasms have abated in violence and frequency. Pulse 110. Says he feels better. The arms and hands are only slightly affected. Ordered a dose of oil and turpentine immediately.

10 o'clock, P.M.—Bowels fully relieved; passed urine freely. Ordered calomel, two grains, immediately, to be freely supported with *diluents*.

Thursday Morning, 1½ o'clock, A.M.—Slept from 11 to 12 o'clock, it being the only sleep he had since Monday night. Wanders occasionally; is very restless and impatient, requiring constant attendance, drinks incessantly. For the last few hours he complains of pain under the sternum and along the spine; the spasms are increased in frequency, and

he is covered with sweat. Pupils variable, sometimes contracted, sometimes dilated.

8 o'clock, A.M.—The nurse states that he spent the interval since last report, rather quietly, slept a little, and had less delirium. He immediately recognized me, and said he felt better. Pulse very quick and irregular. Respirations difficult and prolonged; countenance pale, and very anxious; perspiration less. The lower extremities somewhat less contracted; he appears much wasted. I had but moved him in bed, when his face and entire body became suddenly convulsed; the countenance livid and contracted; the teeth inseparably clenched; he foamed a little at the mouth; respiration quick and difficult; he eagerly grasped anything within reach, and remained in this state about three minutes, when he began to respire more freely; the muscles of the face were so relaxed as to enable him to open the mouth; the tongue was drawn downwards and backwards, convex towards the hard palate. In the paroxysms the pupils were widely dilated and fixed; pulse weak, irregular and quick.

10 o'clock, A.M.—For the last two hours the convulsions have returned repeatedly, leaving him each time more exhausted. The spasms are also more violent and much more frequent. The delirium increases, yet at times he is quite collected and sensitive. Pulse very rapid and irregular. Ordered twenty minims of chloroform, the same of laudanum, with four drachms of brandy. This draught to be taken immediately, and to have, after two hours, ten minims of chloroform, twenty of laudanum, and four drachms of brandy. In consequence of his difficulty in swallowing the first dose, the second was not administered. He continues to get worse, convulsions and spasms occur almost uninterruptedly. Respirations particularly lengthened and difficult. Pulse extremely quick and feeble. Becoming quite delirious. He continued in this state for the ensuing few hours. Ordered brandy and beef tea enemas every hour. Brandy and water *ad libitum*. A teaspoonful of brandy, and twenty minums of laudanum every other hour.

3 o'clock, P.M.—He had obtained some little relief from a violent spasm, when he sunk back exhausted and quietly expired.

Dr. Willett exhibited the kidneys and lungs of a patient who died in the Workhouse Hospital, and related the history of the case.

The following case, which Dr. Townsend has kindly allowed me to bring under your notice, is a case of Diabetes Mellitus, ending in phthisis, as is commonly the case with this incurable disease:—

Michael Murphy, aged 24 years, was admitted into the Workhouse Hospital on January 21, 1860. At that time he was passing about three pints of saccharine urine per diem, with a specific gravity of 1025,

to 1030. During twelve months from this time, he passed from 8 to 12 pints of the same urine per diem, the mean specific gravity ranging from 1035 to 1040. He was placed under the usual treatment for this disease, viz., brown bread and oleum jecoris aselli, and during its continuance regained health and strength in some measure; but, as soon as discontinued, viz., the brown bread, the sugar again appeared in the urine, and, after a severe struggle with himself, the poor fellow gave up the brown bread from intense disgust, and was allowed his usual meals. The disease from this time, August 20, 1861, gradually decreased, the sugar daily diminishing, as if the disease had exhausted itself. But now as incurable a one set in, viz., phthisis, with its evident signs of night perspirations, cough, hectic, &c. This has gradually increased up to the present time. About two months ago, he coughed up purulent matter, streaked with blood, in large quantities, but with very little fetor attending it. He then became excessively weak and anemic, suffered greatly from dyspnea, so that, during the last month of his life, he was supported by pillows at his back, night and day; the congested state of one lung, the right, and the emphysematous condition of the left, fully explain this, and he gradually sank till April 17, 1862, eased his sufferings.

Post mortem appearances.—The body excessively emaciated, not a trace of adipose tissue being visible under the skin, and the muscles of a bluish colour, their normal red colour being entirely lost. The lungs extensively disorganized, that on the right side completely bound down to the pleura and ribs, by very strong adhesions, which, at the apex, I could not separate by my fingers, but was obliged to cut, as you see by specimen; it is quite solid, as also is the entire of this lung. Either from tubercle, or its irritative effect, on cutting it open an immense amount of pus escaped, which I traced to a large vomica or abscess at the apex, and also I found a similar one in the middle of the same lung. I also beg you to observe the intense state of suppuration it is in, nearly approaching to the third stage of pneumonia, by Laennec called grey hepatization; or grey softening, by Andral, having both within and externally a yellowish or greyish colour, and when cut, exuding a yellow opaque purulent fluid, turgid somewhat with blood; that on the left side emphysematous. If you observe at the borders, on squeezing it, you will perceive the course of several small blood vessels, not yet obliterated by the enlarged air cells, showing that the emphysema was in this case recent. The heart was small, from the reason of the little amount of blood to drive through the body for its nutrition, and also of a pale colour. Liver normal, but rather enlarged. Stomach normal on the outside; on being cut open, full of thick gastric juice, very acid. Kidneys, as here seen, not much enlarged, and only in a very hyperemic state. Structure tolerably distinct, and showing how

very evanescent are the traces of this formidable disease. In regarding the prognosis of this disease, I think that we can never look for a successful cure, as, should the saccharine state of the urine cease, or the diabetes be cured, the general tendency is, as asserted by several authors, to pass either into phthisis or morbus Brightii. The tendency to phthisis we can easily imagine, in consequence of the tissues of the lungs being so poorly nourished, and its tendency thus to degenerate into tubercle, and this particularly so should the patient show any tendency to the strumous diathesis; its leading to subsequent atrophy of the kidneys also we may assume, in consequence of their hyperemic state, which is the first stage of Bright's disease, in consequence of their over-increased function, this hyperemic state soon leading to obstruction of the renal tubuli by fibrin, the pressure of this on the small capillaries tending to exudation of the albuminous portion of the blood as well as the increased action of the epithelial cells in the tubuli, which, with the pressure of the enlarged capillaries on their outside and loss of cells by desquamation, and entirely filling up the secreting portion, soon passes into fatty degeneration, or the small contracted or atrophied kidney. I think it is also very difficult to state whether the suppurative condition, or abscesses in the lungs in this case, arises from tubercle or chronic pneumonia, as, on feeling very carefully over both lungs, I could not trace a single hard substance between my fingers. We rarely see it so entirely consolidated with tubercle excepting in cases of tuberculous infiltration. But, if we argue that such is the case, how do we account for the entire mass of tubercles suppurating *en masse*, at the same time as to the tendency of tubercle to the upper part and pneumonia to the lower lobes, as well as to the arguments deduced for the preferable localities of each on the right or left sides. I find the best authors differing, and, on that account, deduce that we may consider the question as yet *sub judice*. I find that, after searching several books, it agrees with a form of pneumonia called chronic. Under this head I find that abcesses are frequently found; also, in another form of the same, the lung is found compact, and heavy, pitting little or none on pressure, not crepitant, tearing with difficulty, sometimes almost cartilaginous; when cut, exuding a purulent or mucopurulent fluid; the colour dull red, or yellowish brown or greyish. When distinct lobules are affected, the lung has an irregular, knotty feel; its volume is diminished sometimes. Abscesses exist within the hardened structure, and, in some instances, gangrene was observed by Andral.

TRANSACTIONS OF THE BELFAST CLINICAL AND PATHOLOGICAL SOCIETY.[a]

NINTH SESSION 1861-1862.

Case of Tetanic Spasm, chiefly affecting the Extremities. By JAMES CUMING, A.M., M.D., Belfast.

On the evening of the 7th December, I was asked by a benevolent gentleman to see a youth, of between 16 and 17 years of age, who, he said, was dying. On reaching the house, I found the patient—a thin, nervous-looking lad—suffering from very violent pain in the region of the heart and in the limbs. On applying my hand over the precordial region, I felt the heart acting with a violent heaving impulse, shaking the patient with every pulsation, indeed I do not remember having ever felt a more forcible impulse. There was, however, no irregularity, and the pulse did not give any indication of the disturbance at the centre of the circulation, being 84, full, and not remarkably strong. The breathing was hurried. On examining the extremities, I found that the muscles of the forearm were rigid, the wrists slightly flexed, and the thumb drawn into the palm of the hand. The fingers, without being clenched, were so strongly flexed, that a moderate force was not sufficient to open them. The feet were turned inwards and the soles arched. There was no swelling of the joints, nor any tenderness on pressure. The patient told me that paroxysms occurred about every 10 minutes, and I remained in the house so as to have an opportunity of seeing one. When it occurred, the trunk and limbs became quite rigid and extended, the abdominal muscles were strongly contracted, and the patient screamed loudly.

Observing that the affection presented a distinctly tetanic character, I looked carefully for the affection of the facial muscles, which is so generally present in that disease, but I could detect no trace of it. The countenance was certainly for a moment convulsed with pain, but there was no corrugation of the brow, no risus sardonicus.

I inquired minutely and carefully as to the existence of any difficulty in mastication or deglutition, or of any painful spasm of the jaw, but the patient assured me that he had not suffered anything of the kind, and his relatives were confident that there had been no change whatever in his features or expression. He stated, however, that his tongue had been stiff, and the tip turned up, and that there had been some pains and rigidity in the sides of the neck.

The history of the case was as follows:—He was apprentice to a carpenter, and about a fortnight before, while working out of doors, had

[a] These reports are supplied by Dr. Wm. M'Cormac and Dr. David Moore, Secretaries to the Society.

been one day exposed to much cold and rain. The day after, he had taken the cramps through his body and limbs. For eight days he had suffered from them, at first about every hour, but subsequently much less frequently, and three days before my visit, feeling much better, he had returned to his work. But the spasms recurred so violently, that he was obliged to return home, and from that day had become progressively worse. During the entire time, the pain about the ensiform cartilage was the most severe symptom under which he laboured; and his father, with whom he slept, said that he had been kept awake by the beating of his son's heart. The bowels had been pretty regular, and he had been besides two or three times smartly purged with salts and senna; no worms had been passed, and he had always had some appetite.

I ordered small doses of laudanum and tinct. hyoscyami, to be given during the night. In the morning I was agreeably surprised to find that he had slept a good deal, and that the spasms were much less frequent. During the intervals the heart's action was tranquil and quiet, and, even during a paroxysm, the impulse had a much less violent character than on the preceding night. There was no sign of organic disease. From that period the spasms diminished in frequency and in severity, the excited condition of the heart only occurring when the spasmodic attacks supervened, and soon subsiding after their cessation; and on the 13th I allowed him to rise, as no paroxysm had occurred for 24 hours.

The chief points of interest in this case are, I think, the absence of any affection of the muscles of mastication and deglutition, and the symmetrical affection of all the muscles supplied by the spinal nerves, and of that one of the so-called cerebral nerves, which presents, perhaps, the closest analogy to a spinal nerve, the hypoglossal.

It is also a question of some interest to remark how closely the symptoms resembled those of a case of poisoning by strychnia, especially when we consider that in all probability the exciting cause of the disease must be looked for in the repression of some excretory matter giving rise to an impure condition of the blood.

Bright's Disease of the Kidney; Fever.—Professor Ferguson brought before the society some particulars of a case which, at first, presented the aspect of simple fever. The case, however, did not follow the usual course of the disease. There was constant cough, great epigastric tenderness, and subsequently bloody stools. About 36 hours before death the patient became rapidly worse, and sank without any apparently sufficient cause. At the *post mortem* examination, all the mucous membranes were found congested, and in both kidneys the usual appearances of *morbus Brightii* were presented. The congestion of the bronchial mucous membrane accounted for the incessant cough. No history which could elucidate the case could be obtained.—*January* 4, 1862.

Popliteal Aneurism.—Professor Gordon introduced a patient who had been successfully treated for popliteal aneurism by compression. There only remained a small tumour in the ham of the size of a pigeon's egg.

Fracture of Femur ; Amputation.—Professor Gordon also exhibited the amputated limb, after mill injury, which had caused separation of the lower epiphysis of the femur, and extensive separation of the periosteum.

Epithelial Cancer.—Dr. Browne exhibited two specimens of epithelial cancer which he had removed from the scrotum. He considered them excellent examples of the disease.

Rectal Tumour.—Dr. Browne showed a remarkable tumour, removed from the rectum of a boy. It had been attached by a long fibrous pedicle which gave way under slight traction. Its appearance and size was that of a small strawberry. On section, and examination under the microscope, it indicated a striking glandular structure, containing numerous secreting cells, similar to the follicles of Liberkühn of the large intestine, and lined with columnar epithelium of a very perfect kind.

Compound Fracture of Ulna ; Secondary Amputation.—Dr. Browne exhibited a forearm which it had been necessary to amputate after severe mill injury. There was extensive laceration of the soft parts, and fracture with denudation of the ulna. In the first instance, after consultation, it was deemed advisable to attempt to save the limb, while it was requisite to remove the lower half of the ulna, the wrist joint being necessarily laid open. The case did not progress favourably, and secondary amputation was had recourse to with a good result. Dr. Browne considered that even had the limb been saved, its usefulness would have been seriously impaired owing to the loss of so large a portion of the ulna, and the destruction of the soft parts.

Caries of the Metacarpel Bones ; Amputation.—Dr. Browne exhibited the fourth and fifth fingers, with portions of the corresponding metacarpal bones which he had removed from a patient admitted to hospital for what was at first a simple phlegmon. This had been treated in the usual way, and the patient left the hospital almost well. In a few days he returned, unhealthy action having set in; and, on examination, the metacarpel bone of the third finger was found distinctly carious. It was surmised, but could not be clearly ascertained, that the fifth metacarpel was also diseased. Under the circumstances it was decided to amputate the diseased portions of the hand, and to be guided in the steps of the operation by the condition in which the fifth metacarpel might be found. —*January* 11, 1862.

Melanotic Tumour of Orbit.—Dr. Browne introduced a woman of 30

years of age, labouring under melanotic tumour of the orbit. In this case excision of the eye-ball, for melanosis, had been performed by him two and a half years ago. At that time the tissues external to the eye-ball were not affected. For 18 months after, the patient enjoyed good health, when a small tumour began to be observable at the inner canthus, growing slowly at first, but latterly with rapidity, extending down the cheek, and probably into the nasal cavity, as there is at present a sanious discharge from the nose. It is now of a year's duration, in length two and a half inches from the margin of the orbit to its extremity, and rotund in shape. Sensations of acute pain are occasionally experienced in the part, followed by a discharge of blood from the nares which relieves the pain for the time. None of her relatives suffer from any form of cancer, nor can any history of it be traced in her family. Dr. Browne stated that, under all circumstances, melanotic and cerebriform tumours of the eye-ball are most liable to recur. In six cases of this form of disease in which he had extirpated the eye-ball, there was only one in which the affection did not return. Operative interference with this case would be useless now, the disease having implicated the wall of the antrum, and extended into the nasal cavity.

Congenital Cataract.—Dr. Browne introduced a case of double congenital cataract in a boy of thirteen years of age.

Both eyes had undergone the "needle operation," and were progressing satisfactorily. Dr. Browne remarked, with respect to the period of life in which the operation should in such cases be performed, Mr. Saunders considered that it should be done early; whilst others held that there was a risk of too active absorption after needle operations in infancy. Dr. Browne agreed with Mr. Saunders, as when an early operation was had recourse to the children were enabled to be educated at a proper age, and the eyes had not acquired the habit of rolling about in search of light, which is extremely difficult to counteract when the muscles have once acquired it.

Since the operation the boy stated that all surfaces, whether prominent or not, appeared flat to him, and he evidently imagined all objects to be much nearer him than they really were, arising, no doubt, from the want of a proper idea of perspective.—*January* 18, 1862.

Cataract.[a]—Dr. Browne also introduced a case of double cataract in a girl of fourteen years of age, in whom one eye had been operated on.

The needle operation had been performed on the right eye on the 29th October. Smart inflammation ensued, persistent, requiring the repeated application of leeches. A small bit of the capsule of the lens still remained unabsorbed. Dr. Browne remarked that, when the lens is in a semi-fluid condition, there is much risk of inflammation if the needle be

[a] This case is referred to in Transactions of October, 26.

too freely used. In this case, although its use had been slight, yet smart inflammation had set in.

This girl did not suffer from any inaccurate appreciation of distances, like the boy previously introduced, as her sight had been pretty good until two years ago.—*January* 18, 1862.

Strangulated Incarcerated Femoral Hernia.—Dr. Browne read notes of a case of strangulated incarcerated hernia in a female of 40 years of age, in whom death had occurred from peritonitis, two days after the operation for the relief of the constriction.

The patient had laboured under incarcerated femoral hernia for the past two years, for which she had never worn a truss. On the 14th of the present month she first complained of pain in the site of the tumour.

On the 15th vomiting set in, and on the 16th she was admitted to hospital.

On admission she experienced general and diffuse pain over the whole surface of the abdomen—most marked in the vicinity of the tumour. Her face was pale, shrunken and anxious. Pulse 130, and scarcely perceptible.

On consultation with Dr. Murney it was considered advisable to operate, although sub-acute peritonitis had evidently set in.

Chloroform having been administered, the tumour, $3\frac{1}{2}$ inches in length by $2\frac{1}{2}$ in breadth, and in depth two inches, was cut down upon, the sac opened, and found full of apparently healthy omentum, on raising which, a knuckle of the ilium, three inches in length, of a very dark chocolate colour, but still retaining its glossy appearance, was found.

The stricture having been divided, the intestine was gently drawn downwards, when the part above the site of constriction being found healthy in appearance, the gut was carefully returned—due care being taken that no part of it was constricted by omentum.

After the operation the vomiting ceased, but the pain and tenderness of the abdomen still continued, and the pulse, which had risen under the influence of the chloroform administered, became almost as rapid and feeble as before. It was evident that the operation had afforded little or no relief to the shock inflicted by the strangulation of the bowel.

Next day, on finding considerable fulness of the great intestine, an enema of oil and turpentine was exhibited without effect.

The patient gradually sank, and died on 18th, 51 hours after the operation.

On *post mortem* examination, the great omentum was found much congested in its upper and middle portions; its lower border being inflamed, in a soft and ragged condition, and coffee coloured in appearance. It was adherent by lymph to the inner aspect of the opening through which the protrusion had occurred.

The small intestine, generally, was congested, and for the distance of several feet, on either side of the constricted portion, presented marks of inflammation, with spots of lymphy exudation, of the size of a shilling, or larger, scattered over its surface. The part which had been engaged in the protrusion was highly inflamed, of a dark chocolate colour (which scarcely seemed, however, so dark as at the time of the operation), its surface being studded with lymphy exudation.

Parietal peritonitis existed over the lower three-fourths of the abdominal cavity, which contained a pint and a-half of effused serous fluid.

The ascending and transverse colon were full of feces.

Dr. Browne remarked, that although the presence of peritoneal inflammation, in cases of strangulated hernia, renders the prognosis very unfavourable, still it should not deter the operator, as the inflammation frequently begins to subside on the relief of the stricture. He had lately operated for the relief of a strangulated femoral hernia, of four days' duration, where subacute peritonitis also existed, and where, on opening the sac, upwards of 40 ounces of highly coagulable serum flowed away; yet, on the relief of the constriction, the unfavourable symptoms gradually abated, and the patient did well.

On the Semeiotic Importance of the Frequency of the Pulse in Puerperal Women. By PROFESSOR LEVY. Read at a meeting of the Royal Medical Society of Copenhagen, 28th November, 1861. Translated from the *Bibliothek for Læger* for April, 1862. By WILLIAM DANIEL MOORE, M.D., T.C.D., M.R.I.A., Honorary Member of the Society.

ONE of the questions which, from an early period of my clinical practice, I have endeavoured to clear up, has been that of the reality of the so-called milk-fever in childbed. In this point of view I instituted accurate investigations, three times daily, as to the state of all healthy puerperal women, and was, of course, obliged to direct special attention to the state of the pulse, the frequency of which, reckoned by a half minute pulse-glass, was constantly noted. These investigations were carried on with periodical interruptions, caused by intercurrent epidemics, during more than two years, and I thus learned to attach so much value to the semeiotic indications of the pulse, that I have since, for a long series of years, continued to note, morning and evening, the pulse in all puerperal women in the institution, from the birth of the child to the seventh or eighth day after delivery. It is, therefore, resting on no slight experience that I venture to express my conviction, that the pulse is the phenomenon which, above all others, is adapted to make us feel secure, uneasy, or anxious about the state of puerperal women; and which, conse quently in

a high degree deserves our constant attention. Speaking generally, it is true that this conviction is participated in by most practitioners; but I have nowhere found the question better investigated than in a short article by Dr. M'Clintock, in the *Dublin Quarterly Journal*, for May, 1861, which, on account of the accurate agreement in many points between our observations, has been the immediate cause of my now communicating the results of my experience, which has, in many respects, been more extended.

The boundary between health and disease in puerperal women is certainly more difficult to determine than most people are inclined to admit. In its latent form puerperal disease is not unfrequently present before or during delivery; and even where it arises, as it generally does, after the birth of the child, the symptoms are often so obscure, and the whole course of the disease is so insidious, that much attention is required to discover it in time. What contributes still more to render the physician's position in this respect difficult, is the peculiar tendency found in many puerperal women, to conceal from him the subjective phenomena of disease, or at least to represent them as quite unimportant; a tendency which is, no doubt, in most cases, due to a desire to be, and to be considered, well, but which often depends upon a dread of disagreeable remedies, especially of leeches, and blisters; and in the common people is not unfrequently connected with the superstition, that if they once begin to use medicines the disease will then attain a fuller development. Unfortunately this tendency in puerperal women finds ready encouragement in a similar predisposition in the midwives, who are unwilling that their patients should be ill, and, therefore, during the first days after delivery gladly seek out, or accede to, any other explanation of the morbid perceptions of the latter, and by concealment or incorrect statements of facts mislead the physician. For the latter, therefore, nothing can be more desirable, than in a purely objective symptom, independent of all arbitrary representation, to have a somewhat reliable basis for his opinion as to the patient's state; and precisely such, I think, we have in the pulse, whose indications, when they are accurately observed, and duly estimated, will very rarely, indeed, deceive our expectation.

The quality of the pulse capable of giving most information in this respect is fortunately that which is most easily ascertained, and is least dependent on peculiar powers of observation. For while in other directions the finer shades of the rhythm, fulness, force, and form of the pulse have their unmistakable importance, it is chiefly its frequency we must attach importance to in reference to the subject under consideration. As a general rule we may lay it down that a pulse of 80 beats in the minute, or a little over that number, gives reason to feel secure as to the patient's state; that one of 100 must make us suspicious and uneasy about her health, while one of from 120 to 130 or more, indicates a

threatening, though in other respects more or less latent, puerperal disease.

That the action of the pains in natural labour, by reason of their powerful influence upon the nervous system, must also influence the contractions of the heart, and, therefore, the pulse, was to be assumed *a priori*, and has lately been proved by direct measurement of the latter. But just like the nervous system the pulse, in general, becomes, with surprising rapidity, quiet after delivery is over, and in the healthy puerperal woman the equilibrium is readily restored after the first rest, in a few hours subsequently to the birth of the child. If labour has been unusually slow or painful its influence on the frequency of the pulse may sometimes be still observed during the first day, just as in rare cases I have for the first couple of days remarked a disturbed rhythm in an irregular intermission, which can be ascribed only to abnormal innervation depending on the labour.

If the labour has a completely undisturbed course, the pulse also continues quiet, with slight fluctuations between 70 and 80, or between 80 and 90, generally a few beats more in the afternoon, but sometimes it is more frequent in the morning, and, when nursing begins early, most usually without being much affected by the secretion of milk. A quiet pulse belongs, therefore, to the physiological puerperal condition; and so long as it keeps quiet we may, in general, feel easy about the patient, even though, as I have sometimes seen, it should be remarkably slow, as 50 and under. Like every rule this also has, however, its exception; for we may sometimes in incipient metritis find the pulse for a short time so unaffected thereby, that if unacquainted with the fact we might be misled in our appreciation of the now intermitting, now remitting uterine pains; but if we visit the same patient after the lapse of only a few hours, the greatly increased frequency of the pulse will soon give certainty to our diagnosis.

In feverish puerperal patients the supervention of slowness of pulse is to be regarded as a very reassuring symptom, when this change is persistent, and is attended with a diminution of the other morbid phenomena. But we must beware of prematurely considering the slow pulse to be a certain sign of improvement, as we might otherwise often expose ourselves and others to bitter disappointment. For, leaving out of view that occasionally a transitory slowness of pulse may be due to an equally transitory action of medicines, as I have often seen to be the case after the use of opium in large doses, of digitalis, and of veratrum viride; there often occur, in the various forms of puerperal fever, remissions of the frequency of the pulse as well as of other morbid symptoms, which are sometimes well adapted to excite illusory hopes. Thus I have occasionally, in very considerable and extensive peritonitis, seen the pulse, a short time after a copious effusion, diminish so much in frequency, that from 120 or 130 it has sunk

under 100; indeed I even remember one case where for two or three days it fell to nearly 90 beats in the minute, until, probably in consequence of an exacerbation of the inflammation, it again assumed its former frequency, and death soon after followed. Much more frequently is the practitioner liable to be deceived in the pyemic form of puerperal fever, when the latter runs a less acute course and has not yet distinctly localized itself, as the pulse in the intervals between, and especially shortly before the recurrent cold fits, may sometimes sink almost to its natural slowness, and, when the paroxysms assume a somewhat regular type, might suggest the idea of a simple quotidian or tertian fever. But even when the pyemic process is distinctly localized in one or other organ, as in the cavity of a joint, or in the pleural sac, periodical remissions may sometimes (and even repeatedly) manifest themselves with a slowness of the pulse, which for a time reassures the less experienced, until a fresh deposition of pus, either in the same or in another organ, again produces the former frequency, and thereby dispels the illusion. Nay, even towards the closing stage of the pyemic morbid process, when everything appears as bad as can be, we may sometimes, immediately after the profuse perspiration, observe a temporary but striking slowness of the pulse, probably only a result of the extreme exhaustion.

As certainly as the slow pulse may in general make us feel secure as to the patient's state, so surely may it be said that the frequent pulse ought to make us suspicious, uneasy, and anxious about her, and in the same proportion as the quickness of pulse increases. But in estimating the signification of the frequent pulse, a stricter criticism is necessary, as in many instances an elevation of the pulse may be observed in perfectly healthy puerperal women, or, it may depend on other more or less latent morbid causes, quite unconnected with puerperal fever. Experience of this kind is easily collected in a lying-in institution; but such cases are only too readily overlooked in private practice; and yet their importance, in both a diagnostic and prognostic point of view, is great enough to give them a claim on the attention of every practical physician. In endeavouring, therefore, to give a sketch of the several influences which, in healthy puerperal women, or at least in such as are free from puerperal fever, may be the cause of augmented frequency of the pulse, I shall, like M'Clintock, lay special weight upon the—in a practical point of view—essential difference, whether the quickness of the pulse is *momentary*, *temporary*, or *permanent*, and I shall group the cases accordingly.

A *momentary* or *rapidly transient* frequency of the pulse may be produced in the puerperal woman by any unusual influence upon the nervous system, and may, therefore, be classed among the daily occurrences of the case. Its causes are, of course, extremely numerous, so that it is only as examples that I would mention a few: any mental emotion, childbed visits, the

advent of the physician, a request to be made of him, nursing the child, &c. Like the cause, the effect in such cases soon passes away, as a protraction or speedy repetition of the visit will easily demonstrate.

If the frequency of the pulse continues for several hours within the period of one day, we consider it to be *temporary*. Such is frequently observed during the first days of the puerperal state, as a result of want of sleep, or of disturbed rest at night, which, in private practice, is often caused by the restlessness of the child; in lying-in institutions, by the cries of the adjacent women in labour. If the sleeplessness be not caused by external disturbing influences, it deserves the physician's special attention, and must, if it be repeated next night, be counteracted by morphia, as the attendant nervous and vascular irritation might otherwise forebode evil to the patient.

Not very unfrequently the temporary rapidity of pulse is due to *stimulating ingesta* of various kinds. I have seen it produced by soup, coffee, wine, and brandy. If the physician quickly discovers and removes the cause, the consequences will not be of further importance. But if he be too confiding, or if the smuggling be too cunningly carried on, he may, in this manner, for several days be caused much uneasiness respecting his patient. I have myself seen many cases, where the wine or brandy flask, concealed under the clothes, was not discovered until the bed was changed.

A temporary frequency of pulse, but commonly in combination with increased cutaneous perspiration, is often the result of too high temperature in the lying-in room, produced in winter by excessive fires, in summer by the action of the sun's rays. On unusually hot summer days the pulse may thus be found elevated at the same time in the majority of the patients in the institution; and this effect of heat not unfrequently manifests itself in connexion with a perceptible tendency to hemorrhage.

Lastly, we must mention as a cause of the temporary frequency of pulse, the *mammary irritation* produced by the afflux of the milk, although this influence is far from affecting the majority of puerperal women, and still more rarely manifests itself by other febrile symptoms.

Permanent, I would call the abnormal frequency of pulse, when it continues during a great or the greatest part of the confinement; and precisely for that reason it is well adapted to cause anxiety about the patient. As such, we may meet with frequency of the pulse either in cases where no disease at all exists, or in cases where the morbid, but non-puerperal, cause of the rapid pulse is so latent that it can be discovered only by special investigation.

To the first category may be referred:—

(*a*) Cases of an *habitually frequent pulse*. Quite apart from all defects in the vascular system, or in the composition of the blood, there are rare cases where individuals, and I have specially observed it in women, in

the state of health, or upon any indisposition, habitually have a pulse ranging from 100 to 120. It is, of course, only accidentally that the physician's attention is directed to this point, either during a long acquaintance with the patient, or where the latter is himself conscious of the fact, and can inform his medical attendant of it. Thus it has often occurred to me with puerperal patients, that when they daily observed the dissatisfaction as to their state which I manifested, and at length comprehended, or accidently heard, the reason thereof, they stated with a smile that the frequency of their pulse had before on many occasions been remarked by physicians, and, even without any illness, had usually continued with them.

(*b*) As a second rare cause of frequency of pulse in otherwise healthy puerperal women, I may mention the *horizontal position.* Without being able physiologically to explain the circumstance, I have, nevertheless, several times found that lying-in women whom, precisely on account of abnormal frequency of the pulse, the cause of which I could not ascertain, I have kept in bed long beyond the usual time, from the very day they first got leave to sit up, exhibited a considerable diminution in the quickness of the pulse, which afterwards continued. It would be very interesting to ascertain how far anything similar, which differs so much from general experience respecting the influence of the position of the body on the frequency of the pulse, is observable in other than puerperal patients.

(*c*) More frequently the abnormal quickness of pulse in puerperal women depends upon loss of blood in or after delivery. The toleration of loss of blood is, it is well known, exceedingly different in different individuals: thus, there are women in whom serious anemic symptoms manifest themselves after comparatively slight loss of blood, while there are others in whom such symptoms are not observed even after very considerable hemorrhage. But though other anemic symptoms be absent, the pulse is apt to be greatly affected, assuming a decided rapidity, which it retains for many days, most frequently in combination with a peculiar softness and compressibility, which usually disappears earlier. If the physician is acquainted with the preceding loss of blood in delivery, the frequency of pulse in such puerperal women will not surprise him; but quite at ease he, nevertheless, cannot be, inasmuch as it is certain that behind this quickness of pulse another may sometimes be concealed, dependent on an insidious and dangerous form of puerperal fever, to which, precisely, puerperal women after considerable loss of blood are particularly predisposed. However, the hemorrhagic frequency of pulse may mislead and prove highly disquieting to the physician, if he has not accurate information respecting the hemorrhage which occurred in or after delivery, either because the midwife did not consider it of sufficient importance to speak to him about it, or because, for her own reasons, she

will have wholly concealed it, or at least, have alluded to it as lightly as possible.

(*d*) Great influence on the frequency of the pulse must be attributed to *physically depressing or alarming circumstances*, especially to such as the patient has been subjected to for a long time before or after delivery. In private practice, where the physician is occupied solely with married women, and, moreover, chiefly in the better circumstanced classes of the population, influences of this kind are certainly rare, and I can therefore very well understand the incredulity of many physicians with reference to the importance of the psychical elements in the puerperal condition in general. But the case is different in lying-in hospitals, and particularly in large institutions where, as in ours, the mass of the patients are unhappy single women, or married women of the most depressed and needy class. Here, mental sufferings have their special home; here they claim the physician's constant attention; for here they play so important a part, that they may justly be considered as one of the elements most hostile to the state of health. How they act, it is certainly not possible always to demonstrate; their direct influence upon the nervous system will be denied by none, who is at all intimate with the etiology of convulsions, spastic labour-pains or mental disturbances in childbed; but that they may also indirectly undermine the natural state of the blood, and so predispose, or directly lead to the development of puerperal fever, has, at least in my opinion, so much empirical probability in its favour, that I have no doubt on the point. But apart from this, it is at least indubitable, that an abnormally increased frequency of pulse in childbed is often due exclusively to a more or less latent mental affection. So long as no other morbid symptoms manifest themselves, there is, indeed, reason for some uneasiness and for much attention to the patient; although often convalescence proceeds without much interruption, nevertheless, our uncertainty as to the patient's state will lead us to require a longer confinement than usual. But if, after the quickness of pulse has continued for some days, the patient becomes sleepless, loses her appetite, and finally, her interest in the child, the outbreak of mania is reasonably to be feared.

(*e*) Lastly, in otherwise healthy puerperal women, quickness of pulse may proceed from *suckling*, as occasionally in nervous females who do not bear nursing, any suction at the nipples is sufficient to produce an accelerated pulse, which continues until the supervention of other symptoms convinces the physician of the necessity of taking the child from the breast; or in women with sore nipples the pain of suckling produces an acceleration of the pulse, which, if the child is often applied, does not get time in the intervals to settle down.

We have hitherto considered only those cases where a more permanent, and therefore often very disquieting frequency of the pulse may take

place in puerperal women, *without* any morbid state to account for the same. We have still to allude to those cases where the cause of the quickness of pulse is not any puerperal disease, but another morbid state so latent that without special attention or investigation it might easily escape the physician's observation. To this class belong—

(*a*) *Pulmonary Tuberculosis* in its earlier stages, which constitutes a not very unfrequent complication of childbed. That the act of parturition, with its strain upon the organs of respiration and the pulmonary congestion of blood produced during the pains, as well as the altered state of the circulation of the blood occurring after delivery, may exercise an injurious influence on the tubercular disease pre-existing in the lungs, partly by exciting a congestive condition or insidious inflammation in the immediate vicinity of the tubercles, partly by inducing new deposits, is in itself probable enough. In reality this probability is not unfrequently confirmed by the insidious febrile action, which, in such patients, continues during the whole puerperal state, without manifesting itself otherwise than by the permanent quickness of pulse, and by a slight afternoon elevation of the temperature of the skin, and occasionally some tendency to nightly perspiration. The cough, under such circumstances, is often so inconsiderable that it is not observed or mentioned by the patient; and if the physician's constant attention to the suspicious state of the latter does not lead him at length to an accurate auscultatory examination of the chest, a misinterpretation of the whole case may easily occur, which in its consequences may be extremely prejudicial to the patient. I here refer especially to suckling, which, under such circumstances, ought most certainly to be as soon as possible given up, but which, when through want of appreciation of the patient's state is longer continued, will not unfrequently lead to a sudden development of pulmonary phthisis.

(*b*) That organic diseases of the heart, and especially valvular diseases, as the result of easily explicable action of parturition, may be the cause of a persistent quickness of pulse in childbed, is evident enough; but in this instance both other cardiac symptoms, and the patient's history of her case, will readily lead the physician on the right track.

(*c*) The *chloremic* quickness of pulse, which by no means rarely occurs in childbed, may sometimes be more deceptive. Where the chlorotic type of disease is strongly marked, this cause of frequency of the pulse will scarcely escape the physician's observation; but in the florid variety of chlorosis, or where the puerperal condition itself gives rise to ordinary congestions of the head and increased fulness of its capillary vessels, the chlorosis may readily be overlooked, and the frequent, somewhat undulating pulse may, for several days, cause constant anxiety respecting the patient.

(*d*) As occasionally the most latent cause of a persistent elevation of

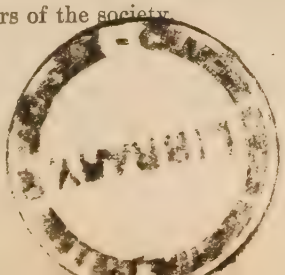
the pulse in childbed, I may lastly mention *Bright's Disease of the Kidney* in its several gradations. At the period when I, with a view to ascertain the relation of albuminuria to pregnancy and parturition, at various times examined the urine of all the patients in the lying-in institution, I often observed an acceleration of the pulse in connexion with a considerable amount of albumen in the urine; subsequently by an opposite mode I arrived at the same result, for, in puerperal women, in whom no other reason could be found for a striking frequency of pulse, I not unfrequently, in examining the urine, found the latter albuminous. In slighter degrees of the affection the hyperemia or irritation of the kidneys, on which it depends, may disappear in the course of the convalescence; but I have also several times seen the albuminuria, although diminishing, continue so long, that the patient being otherwise quite well could no longer be retained in the hospital. In a few cases where the latent renal disease had attained a fuller development, the suspicious frequency of pulse led at length to an uremic condition, and so to death. Where a longer previous illness, a cachetic appearance, or more considerable œdematous infiltrations give the physician a hint thereof, this complication of the puerperal state will be sufficiently recognized; but sometimes, as is well known, all these indications are wanting, on which account the examination of the urine ought certainly never to be omitted in any case where none of the above mentioned causes of a persistent suspicious frequency of the pulse is to be discovered.

In conclusion, I have still to mention a peculiar variety of quick pulse in puerperal women, which, for many years I have at various times observed, and to which I have called the attention of others. For it I know no more suitable denomination than *the epidemic*, inasmuch as I am convinced that it depends upon an epidemic influence. Thus, daily reckoning the pulse of all the patients in the lying-in institution, it could not escape observation, that at certain times a quiet, and at other times a frequent, and even very frequent, pulse was the prevailing or predominant phenomenon; and continued observations have shown, that the prevailingly accelerated pulse always foreboded, or occurred simultaneously with, a periodically diffused unhealthiness among the puerperal women. In saying this, I am far from wishing to convey that the quick pulse in all or in the majority of the patients led to puerperal fever; on the contrary, it was only in some great epidemics that the disease attacked the majority of the patients, while, in general, it visited only a minority of them; and the majority were looked on with suspicion solely on account of the quickness of pulse. In the latter, the pulse gradually subsided during the last days of convalescence, without any other morbid phenomena; but often the disturbances in the secretion of milk; in the lochial discharge; in the action of the skin; or else, loss of appetite and a generally slow convalescence, gave to the confinement a peculiar

aspect which evidently deviated so much from the normal state of things that it must be regarded as dependent on the contemporaneously prevailing puerperal constitution.

This observation respecting a frequency of the pulse in puerperal women dependent, at times, only on epidemic influence, which I much desire to see tested in various quarters, though this can be done only in lying-in institutions, and in the course of a long series of years, is, in my mind, of no small pathological interest. For, as an epidemic influence in this direction can be considered only as prevailing through a peculiar change in the blood, which, therefore, at times becomes common to all puerperal women, but only in a greater or smaller number of these attains to the height necessary for an outbreak of puerperal fever, it seems to me that in this very point lies an exceedingly important argument for the decision of the much disputed question respecting the essential or primary nature of this disease, as well as for the justification of the pathological distinction between it and the local puerperal inflammations which physicians in general are only too much inclined to overlook or deny. In a practical point of view I have utilized my observation so far, that I have allowed a generally diffused quickness of pulse among the lying-in women in the institution, coinciding with the occurrence of some such cases, to act as a warning of an unfavourable puerperal constitution, and, as a hint at the time to limit the admissions as much as possible, for which the arrangement for scattered attendance through the town, of late years, affords facility. After some days, or a week or two, I have often found the state of things improved, and have then, by way of experiment, again permitted the unlimited admission of fresh patients, intending, according to circumstances, to allow it to continue or again to put the limitation in force. And I am, at least, convinced, that in the course of years I have, in this mode, not unfrequently succeeded in preventing or arresting the further development of commencing epidemics in the institution. That under epidemic circumstances of unusually extensive and intense nature this, as all other measures, will prove inefficacious, the last year's experience has unfortunately testified.

As the result of the foregoing observations and reflections, I have arrived at the conclusion, that the pulse glass, used with the necessary care, is a good and indispensable barometer, both of the individual and constitutional puerperal state; and I should rejoice, if by the statement I have made I have contributed to procure for this opinion the adhesion of the honoured members of the society.



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NOTICES TO CORRESPONDENTS.

Dr. O. HEYFELDER, of St. Petersburg, requests us to state that he is preparing a new edition of his work on *Resections of Joints*, the first edition of which was reviewed in our xxxii. vol., and that he will feel greatly obliged to all who, either directly or through us, will draw his attention to any authenticated cases he may have omitted to mention, or furnish him with the particulars of cases operated on since the publication of his work.

We have been obliged to hold over several Reviews and Original Papers.

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